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THE
Worcester Magazine

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Good Citizenship and Municipal Development.

VOL. IV.

JULY TO DECEMBER, 1902.

PUBLISHED BY

The Board of Trade, Worcester, Mass.

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WORCESTER MASS.
PRESS OF F. S. BLANCHARD & CO.

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THE WORCESTER MAGAZINE

JULY

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PUBLISHED MONTHLY BY THE BOARD OF TRADE
WORCESTER, MASSACHUSETTS,
U. S. A.

NAVAL CADET RALPH M. GRISWOLD,
Class of 1902, Annapolis.

The Worcester Magazine.

Vol. iv. JULY, 1902. No. 1.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

Worcester at Annapolis.

ON May 2d occurred the annual graduation at the United States Naval Academy, located in Annapolis, Maryland. In the class of fifty-nine members, five were from Massachusetts, an unusual number to hail from the Bay State in one year. Of these five, Worcester's interest centres chiefly in her own representative,

RALPH MANCILL GRISWOLD,

who stood number 21 in the list, and had the best rating of his fellows from the Commonwealth. The diplomas were presented by the President, and the young men felt considerably exalted at this attention from Theodore Roosevelt, an official who had himself incurred personal danger in the line of duty.

Cadet Griswold is a native of Sharon, Pennsylvania, a son of the late Elisha Griswold, M.D., and his wife, Nannie Green Heywood, a native of this city. Dr. Griswold was a surgeon in the regular army during the War of the Rebellion, and after its close was at the head of the Freedmen's Bureau in Louisiana till 1867, when he resigned and resumed the practice of medicine in Sharon. There he met the lady who became his wife, and there their son, Ralph, was born, Aug. 8, 1881; an older son, Arthur, is a 1902 man of Harvard. In 1896 Mrs. Griswold and sons came to Worcester, her former home, and took up their abode at the old Heywood residence on Catharine Street. Dr. Griswold, the father, had died in Sharon the same year, and on coming to Worcester the sons became pupils in the Classical High School. When Cadet Ralph Earle had ended his course at the Academy, the Hon. Joseph H. Walker gave notice of a competitive examination for the vacancy, and out of the twenty-three candidates young Griswold passed first, and received the appointment. Aug. 1st, 1898, he went to Annapolis for a little extra drill in the preparatory school there, and with the examinations successfully passed, he was admitted September 9th, taking his place among the first years, who numbered at the beginning ninety-three boys.

These "Plebes" suffered all the indignities wont to be offered to beginners, with the fixed determination to get back on the class which followed, but, alas for them, since before their time of "passing it along," came the government investigation into the subject of hazing, and the boys had to pocket all their affronts and treat the next year's class with the most punctilious politeness. It should be stated, in passing, that hazing at no time reached the pitch of brutality commonly ascribed to West Point. At the end of the year in the Academy came the first cruise, which was made on the Monongahela, and was three months in length. They landed at Plymouth, England, riding thence to London, where they spent five days of sight seeing. Next under sail they went through the Bay of Biscay to the western isles, stopping at Madeira, and then they trimmed their sails for home, but they must have gotten into the doldrums, or some other calm, for not till forty-two days had passed did they see land again, and then the famous Capes Charles and Henry, recalling the days of James the First and his unfortunate sons. Through the month of September, the cadets were permitted to enjoy the sweets of home, having in their cruise learned much of the duty and work of the old-fashioned sailor.

The second year soon passed away, and then came the annual outing on the sea. The first half was in the Newport, the second in the Chesapeake, a full-rigged ship, and old fashioned, not only in name but in equipment. Thus they sailed up and down the coast of the United States, going as far north as Portland, visiting also all the ports where ship-building is done, including Lynn, to inspect the great electrical plant located there. Again, September was given to home and its comforts.

The third summer was much like the second in that the cruising, to begin with, was in the Chesapeake, and was up and down the coast. Some time was spent in Gardner's Bay, Long Island, where sea manœuvres were practiced. During the second half of the summer they were shifted to the Indiana, "Bob" Evans' ship in the Santiago fight, and on her a trip was made to Halifax, Nova Scotia, that the lads might see a little of John Bull's battlements. On their return came the final visit home.

While Cadet Griswold did not excel in athletics, his lack of weight and stature being against him, yet in an emergency he could give a good account of himself. An excellent index of a young man's ability is found in the opinion held of him by his associates. In the "Lucky Bag," which is the annual class publication of the Academy, containing portraits, scenes, etc., and of whose Committee on Publication he was a member, we find him served up with his fellows. He was class photographer, and every snap shot in the really entertaining book, save his own, is from his camera. His mates dubbed him "Grizzly" and "Stone-face," and in the kodak impression of him he is bending over his camera. In the text we read:

I love my love with a "G" because he is gay, good natured, and grins. I hate my love with a "G" because he is grouchy, grumpy, and growls. His name is Griswold, and he is a great goose. A man with eccentricities sometimes approaches genius, but never getting there. Will bet on either side of any question, but always wins. Once posed as a barber-pole. "Say, fellows, I heard a pretty good story the other day."

As we note the recurrence of the letter "G" in the foregoing, it would appear that the cadets are not ignorant of the value of alliteration.

With the full course completed, and with the consciousness of having done good work, our young cadet has passed the time since graduation very quietly at his home awaiting the orders that nowadays come to the Naval Academy graduates. The time is not so very far away when the nation had no place for her boys upon whose education she had spent so much, but now she needs them, for we have a navy once more. Our latest Worcester graduate is not a large man physically, standing only five feet, four and one half inches in height, and weighs 135 pounds, but the stock in him is of good quality, and we may expect the best of results in the line of duty. We remember that Admiral Sampson was a man small of stature. June 2d Cadet Griswold reported on the Buffalo in New York, and is now on his way to the Asiatic station, via the Suez Canal, expecting an assignment to duty in the Philippines. Every Worcester citizen will rejoice at any and all good fortune that may come his way.

For more than fifty years Worcester has had special reason for exceeding interest in the Naval Academy. Not only has the location of the Bay State ever given her a devotion to sea service, but a Worcester man was the founder of the school. No Commonwealth, save two, has had so many years of service in the Navy Department as Massachusetts, a circumstance attributable perhaps in part to the fact that the State manned the most of the vessels which compelled Great Britain, in her two wars with America, to sue for peace. Through Cabot, Crowninshield, Henshaw, Bancroft, to Long and Moody, there are thirteen years to the credit of this State. The particular glory of Massachusetts, however, and of Worcester, lies in the fact that George Bancroft, born and reared here, founded the school which for so many years has been the training place for the Nelsons, Hulls and Farraguts of America.

In the "History of the United States Naval Academy," by Park Benjamin, are found these words:

George Bancroft of Massachusetts, scholar, historian, orator and statesman, became Secretary of the Navy in March, 1845. When he left that office, eighteen months later, the Naval School of the United States was established and in full operation at Annapolis, Maryland. The achievement was a masterpiece of diplomacy.

Up to the time of the establishment of the Academy, boys of tender years were appointed as midshipmen in the Navy, and through long years of apprenticeship arose to position. The object of the school was to concentrate the instruction, and by means of actual service upon the sea to give to the cadets all that they formerly obtained through a much longer period. Those who were still rated as midshipmen received their diplomas from the Academy, though they may never have set foot within its grounds. With the story of the school, however interesting it may be, we have nothing to do; ours simply to tell of some Worcester boys who reported there, and in due time received their credentials. There are long gaps in time between some of the graduations, and either the Academy was not a popular institution or many appointees failed to pass their examinations. At the beginning the course covered six years, four in the school and two at sea.

Having been founded by George

Bancroft, it is interesting to note that the first representative from the founder's native city was his nephew, Bancroft Gherardi, a son of Prof. Leonato Gherardi, a native of Italy, and his wife, Jane Bancroft. He was born in Louisiana, where his parents were

NAVAL CADET CHAS. E. BROWN.
Class of 1867.

teaching, Nov. 10, 1832. Both parents dying suddenly of yellow fever, he was sent to Worcester, where he was reared by his mother's people, till, in July, 1846, he reported at Annapolis, with which and with what it is allied he has been connected ever since. Graduating in 1852, number 15 in a class of sixteen, he was assigned to the Ohio as a midshipman, and in ever-rising capacities he continued till his retirement, in 1894, a rear admiral. During the Rebellion, he did effective service, having a part in the Battle of Mobile Bay, and many others. His home is in East Orange, New Jersey.

The register of the Academy bears no other name recognizable as from Worcester till 1867, when there was graduated Charles Eaton Brown, a sure enough Worcester boy, a son of the late Albert Brown and his wife, and brother of J. Stewart and Edwin Brown of this city. He was born Jan. 23, 1847, and his boyhood was spent in this city, having all the advantages of our schools, till from the High School, in the days of Principal Harris R. Greene, he departed for Newport, to which place the Academy was moved in war times. He was graduated number 55 in a class of eighty-seven members, the largest in the history of the Academy. His subsequent career was a brief one, for three years later he lost his life in the terrible catastrophe which befell the U. S. steamer Oneida in the Bay of Yeddo, Japan. It was the 24th day of January, 1870. Only the day before our Worcester ensign had celebrated his twenty-third birthday, and the vessel was on her way home, after a three-years' cruise in Asiatic waters. How light were the hearts of officers and men within those wooden walls. Every man was already counting the days before he should greet his friends again. There were on board 170 souls, 24 officers, and 152 men. It was early evening, between six and seven o'clock, that the British steamer Bombay ran into the Oneida, completely crushing her after portions. Then, to his eternal infamy, Captain Eyre refused to heed the despairing cries of his victims, and with the remark that he had *cut the quarter off a Yankee frigate and*

it served her right, he passed on to his anchorage in the harbor. 'It does not matter that a British court of inquiry, immediately called, cleared him of blame for the cruel blow and imposed a six months' suspension only for failure to stop; the name of Captain Eyre will continue a synonym for Caligula-like cruelty and infamous hatred as long as men tell the story of those who go down to the sea in ships. Out of those 176 beings whose names were borne on the ship's rolls 97 were lost; only a little way from the shore, but the vessel became their burial-case. Perhaps some one reading this sketch and seeing the handsome face of the cadet in all the glory of his white duck and blue jacket, will say, "Of whom does the picture remind me?" Any one thus remarking must have seen the face and figure of a "Lord Byron at Missolonghi."

The year of Cadet Brown's graduation was that of Charles Ward Bartlett's entrance. He is the son of the late Theo. H. Bartlett, for many years the Mayor's clerk at City Hall. His mother was a sister of Gen. George H. Ward, killed at the Battle of Gettysburg, hence his middle name. At graduation he ranked sixth in a class of forty-nine members, and since that date a large portion of his time, twelve years in all, has been given to instruction at the Academy. Also, in the pursuance of sea duty, he has sailed in northern and southern seas, and nearly all intervening waters. The Spanish War found him on the Topeka, and whatever fell in his way to do was well done. Off Nipe, in Cuba, his vessel had the pleasure of capturing the Jorge Juan, a Spanish craft.

COMMANDER CHAS. W. BARTLETT.

His wife, a daughter of the late Judge Hartley Williams of Harvard Street, now bears her sailor husband company in the Philippines. Their son, Hartley H., is a student in Yale College. At present Commander Bartlett directs the movements of the Isla de Cuba, one of the ships captured by Dewey. With anything like activity in the Navy, Commander Bartlett's friends confidently expect to see him rear admiral yet.

Two years later another Worcester boy, Austin M. Knight, though not appointed from Worcester, received his diploma, number 6 in a class of twenty-nine. He is the son of Charles S. Knight, a veteran of the Forty-second Regiment in the Rebellion. Thereby the officer is a brother of the wife of President David Starr Jordan of the Leland J. Stanford, Jr., University of California. He, too, ranks as a lieutenant-commander.

Not till the class of 1883 do we recognize a Worcester name again, and it is that of Timothy Stephen O'Leary, a resident of the first ward, and a pupil in the High School. His boy friends always called him "Tim," and he was ever a crack athlete; one of the

best of ball-players, and his playmates were sorry to see him go, though they knew a wider field was thereby opening for him. Winning his place by competitive examination, his career at the Academy was a highly creditable one, and his old school friends were delighted one morning when, before the entire school, were read by the principal the orders of thanks issued by Rear Admiral George B. Balch, then Superintendent at the Academy, and published by the Navy Department at Washington, William S. Hunt, secretary. It appears that Dec. 6th, 1881, while in his room he saw two small boys break through the ice upon the River Severn. Without a moment's hesitation he rushed from his room, and, plunging into the water, succeeded in rescuing both of them. "For such bravery performed at the risk of life, Cadet Midshipman O'Leary deserves the hearty congratulations of his comrades, and makes it the pleasant duty of the Superintendent to publicly express his approbation of the gallant conduct in general orders at 'parade.'" It was O'Leary's misfortune to graduate when there was little use for him or any of his associates upon the sea. He was number 36 in a class of fifty-four, but the best the Government could do for him was to find employment for him in the hydrographic office in Washington, its only redeeming feature being the fact that it had something to do with water. Later he was reinstated in the Navy, and is now a paymaster.

The next name having a local flavor comes no nearer home than Northbridge, it being that of Lucius Allyn Bostwick, a son of D. S. Bostwick, a veteran of the Civil War, and long connected with the Whitins of that town. He won his place over all competitors from all parts of the district, and made a very creditable record at the school, graduating in 1890, number 26 in a class of thirty-four members. He is a lieutenant, and saw service during the Spanish War, being aboard the Oregon, and thus helped to drive ashore the Cristobal Colon, and so end Spanish rule in America. When the last gun had been fired, and the end had been announced, and all the land was filled with rejoicing, the father remarked to the writer within a few weeks of the event, "Not till the announcement of the victory came did I realize how large a burden I was carrying in the shape of that boy of mine on shipboard," a sentiment doubtless true of every heart that has a loved one in danger, whether on sea or land.

As Cadet Bostwick neared the completion of his course there was a small boy over on Kendall Street who watched the situation with the utmost care, for he, too, wanted to be reckoned a member of the U. S. Navy. When the time finally came, Ralph Earle, who was a High School graduate, class of 1891, and had entered the Polytechnic, went into the contest with the firm resolve that the boy who beat him would have to work for it. Fortune and hard labor told, for he came out at the top, and was rewarded with the coveted appointment. Possibly no Worcester boy ever went to Annapolis with a lighter heart than young Earle. His father, Stephen C. Earle, was a veteran of the Rebellion, and his mother, a sister of that Ensign Brown who, in the Oneida, had perished so foully away back in 1870. When his parents tried to dissuade him, picturing the sad ending of the uncle, the boy declared he would prefer to be drowned a member of the Navy than not to enter the Academy. He devoted himself to his tasks with the utmost zeal, and at graduation in 1896 he gained the favorite Worcester number, viz.,

6, from a class of thirty-eight. During the Spanish War, he was constantly on duty. At first he was Navigator of the Hornet, a converted yacht, acting as a part of the attacking fleet. May 8, 1898, he was commissioned Ensign. Though not at the Santiago fight, his Hornet buzzed all around the island, inflicting stings upon the enemy wherever opportunity offered. She was in two sharp engagements in Manzanillo harbor, and our Ensign narrowly escaped one shot which went between him and his Captain, near whom he was standing. Only an hour or two before his death, he had met his friend, Ensign Worth Bagley, who fell upon the deck of the Winslow at Cardenas May 11, 1898. Following the war, he had a two-years' cruise on the Essex, and in August, 1901, as a lieutenant, junior grade, he was ordered to the Proving Station at Indian Head, twenty-three miles below Washington on the Potomac. It would seem that Neptune with his trident did not absolutely rule the hour at Annapolis, for somehow Cupid managed to get in his work, the sequel appearing when, on Sept. 29, 1898, he was married to Janet T., daughter of Pay Director Caspar Schenck of Annapolis. To-day there

LIEUT. (J. G.) RALPH EARLE.
(His cadet picture.)

is another Ralph Earle, whose parents are looking forward to the day when, as "the son of an officer," he too may become a naval cadet, and if he does, what a Viking ancestry will inspire him, for not only his father, but his mother's fathers for three generations, were seamen bold.

The immediate future will be provided for through a competitive examination in progress this 23d day of June as the MAGAZINE goes to press.

Address Before the Worcester Board of Trade,

BY MR. JAMES B. REYNOLDS

Of New York City, at the Annual Banquet, May 2, 1902.

I DESIRE to thank the chairman for his introduction. I must confess that in attempting to speak in behalf of the administration of government in New York city, I am impressed with the logic of a remark made to me a few years ago by a Scotch gentleman in Edinburgh. An American came to the city on his way to India who was about to attempt educational work in that country, and I suggested to my friend that it might be interesting to secure a talk from him in Edinburgh. He replied to me, "Well, you know, Mr. Reynolds, in Scotland we would a little rather hear a man tell what he has done than what he is going to do." And I took the lesson to heart, and I feel to-night that our tenure of office has been so brief that it is a little impertinent in me to speak in behalf of that work which is so largely in the future.

I shall speak rather of our aspirations than of our accomplishments. I do not say that because we have not been active, because I have realized, at times rather painfully, that we have been active: but because the results of what we have been doing can not yet appear.

The first point I would like to emphasize is this: it comes to me from a somewhat extensive experience in New York city. I think if you will look over the history of municipal government in our country, you will say we have had one experience: there has been a long period during which the government has not been particularly good, and at the end of that period a sudden, stormy awakening, with the cry, "Turn the rascals out"; and the rascals are turned out, and then follows a brief period of honest government, and the minor rascals are punished and the major ones escape, and the same conditions as formerly are restored. It has been most fitly described as a state of coma characterized by fits. And I think we may fairly say that the history in large cities has been a state of moral indifference characterized every once in a while by a delirium of reform. The same condition which makes our administration tentative has also appeared in our laws. It is not very difficult to secure enthusiasm in behalf of legislation that is very much needed. The great difficulty that we find in city as well as in state is to secure interest in the enforcement of laws. I listened a few years ago to an address from a gentleman from this country in London, in which he tried to explain exactly how we managed our public affairs: "We have a very happy state of government in America, which you don't apparently appreciate, and the way we arrange it is this: we pass our laws to satisfy one half of the population, and we leave them unenforced to satisfy the other half." I suspect that there is more truth than satire in this. I believe the responsibility for this condition rests largely with the intelligent citizens of the community who have

not taken an interest in affairs at the critical time; and thereafter have not taken sufficient interest and activity to see that legislation that is wise is enforced.

The second quality, it appears to me, is a sense of reasonableness toward those whom we have placed in positions of official responsibility. I feel inclined to speak feelingly on this point. I remember one of the officials recently elected told me he had received a communication from an organization which had supported him three days after he had begun his duties. This communication was in the nature of a resolution, and the resolution condemned him unreservedly because within forty-eight hours he had not turned all the rascals out in his department. It has been my great responsibility as secretary to the Mayor to inspect a large part of the Mayor's correspondence, and I feel that we have been indebted not only to the citizens of our own city for a great deal of valuable advice and assistance, but to citizens from one end of the country to the other for all sorts of advice. There has not been an event of more or less importance since the first of January which has not led to an extensive correspondence on the part of those well, and less well, informed as to how the thing might better have been handled than we had handled it. I remember, at the time of the unfortunate tunnel accident, we were the recipients of letters, from one end of the country to the other, accompanied by plans, explaining exactly how we might have managed the New York Central Railroad so that such an accident could not have occurred. And I recall particularly one letter from a citizen in Pennsylvania, informing us at the outset that he lived on a branch railroad where they had only two trains a day, to the effect that if we had only managed our railroads as they managed theirs we should have no difficulty. He explained, "Our principle is this: we never allow the second train to start until the first has reached its destination. We could never, then, have an accident in the tunnel."

I remember another letter which came in from another citizen, which illustrates the embarrassing and difficult requests that are made of us. The man said that he had been imposed upon by certain citizens of our metropolis. He had received a communication which asked him to forward sixty-six cents, and he forwarded the sixty-six cents. He was promised in return for the sixty-six cents that he should receive ten cakes of soap, a first-class razor, and a watch and chain. He had heard nothing more about the matter, and he felt he had been treated most unjustly, and he appealed to the Mayor —not to get back the sixty-six cents, but to get the ten cakes of soap, the first-class razor, and the watch and chain.

It is but right and just toward those whose knowledge of political affairs is often discredited that I should say that the most reasonable request which has been made of the present administration was made by a woman in a recent letter to the Mayor, as follows:

"Dear Sir: Will you please see that the rights guaranteed to me under the Constitution are granted to me?

"Thanking you in advance for your courtesy,

"I am," etc.

If all our correspondents would take as reasonable a view as this, and be so appreciative, in advance, of what they were sure we would do, our path would be much smoother.

But I think those who are engaged in commercial enterprises may fairly be expected to be more considerate of those whom they place in official positions. They know that when anything is seriously wrong in their business they can alter the situation. They do not recognize any difference in conditions, but expect that when they have placed one of their number in a public office he can act with the same autocratic power and freedom that they themselves can exercise in their private businesses. They fail to recognize that after all a government can not run very far ahead of the people; and that if we are going to achieve good government, it must be simply not because good men have been elected, but because other good men sustain them in the carrying

out of measures to achieve good government. And it is not until that principle is thoroughly recognized that we shall be able to establish good government firmly in our municipalities.

The third point is this: I believe that, more than to any other principle, we shall owe success in our administration to an extension of the principle of fraternal brotherhood—the principle of the sense of kindness. I believe that the first delegate sent from the city of Boston to investigate the city of Worcester, when he returned to that sacred city said that he thought that the land now occupied by Worcester would contain thirty families, and possibly sixty families. And I am sure that if that worthy citizen were alive to-day he would feel that the condition which exists in your city is just as impossible a one as our more crowded conditions in New York city. We have only to look back fifty or a hundred years to find entirely different conditions. One hundred years ago almost every citizen, however poor he might be, had his own back yard. To-day in nearly all the large cities the children do not play in the back yard, because they haven't any back yard, or have to divide it with other families, but the playground of the children and the recreation of the grown people in our cities is the public highway and the public recreations and amusements. So we have an entirely different class of city from that of fifty or a hundred years ago, and if we are going to meet the situation we must meet it with a recognition that a kind of compulsory brotherhood exists, and we are to decide as to whether it shall be a brotherhood of peace.

Another fact: We are all aware that the so-called poor quarters of nearly all of our cities are quarters occupied, as a rule, by one foreign population or another, and that the question of our poor quarters is usually a question of how shall we handle some foreign element, and we consider, and we say that they represent the dangerous element. It is my opinion, and I give it after eight years of living in the most densely crowded tenement-house section of New York city, that when those foreign emigrants come to our shores, they, on the average, believe more earnestly and sincerely in democracy than do we ourselves, and if we handle them right during the first five years we might make of them better citizens than we make of ourselves. I know that hundreds and thousands of them come with this idea—mainly from Italy, Russia and Austria; they come because they wish to escape from the conditions under which they formerly lived, and because they have been told that in America is a land in which democracy is believed in. They come to our cities and they find that because of their limited means they are put into the poor quarters, into dirty and dismal tenement houses, the least adequate and satisfactory provision for life. And the moral shock which is given to hundreds and thousands of these people is a situation the significance of which we have never begun to appreciate. I remember that two or three years ago I was visited by a little Russian Jew, who asked if he might have the privilege of placing his soda-water stand in front of the building where I was located. I asked him about his capital and stock in trade, and he said he had so much for his stock, and $5 for protection, for the policeman. He mentioned this last item in precisely the same tone as he used in mentioning the others, as though that were a conventional item of business. But I realize, gentlemen, that that stood for an enormous change in that man's point of view. That the man who had come from Russia as a land from which he must escape, to America in which he expected to find labor, had found that the police were as corrupt as in St. Petersburg, and had given up all hope and was the victim of despair. I do not think that we have yet adequately realized the price which we pay for bad government. It is paid in flesh and blood. It has been well and truly said that whenever there is bad government, the rich pay and the poor suffer. The rich may be able to pay for a time, although I think they are unwise to do so, but the poor can not be allowed to suffer when, in the end, we shall have to suffer and pay the bill into the bargain, and the results

will come altogether upon us. And I believe, gentlemen, that, rising to the situation and to the opportunities that are before us, we shall realize that this crowding together is not necessarily a source of evil, but is also a source of good and that the interest of one is the concern of all. If we would be willing to give our attention to the improvement of the physical conditions of our cities, insisting that certain standards shall be maintained: that the streets shall be clean and the houses sanitary; public education of the best character provided, especially to those who are going through their experience of Americanization; if we shall see that the moral and social life is of such a character as will elevate citizenship,—we shall find, as I have suggested before, that this population comes to our shores with the elements on which we shall and must count for the realization of our ideals. I believe the political situation is far from being a discouraging one. It is encouraging because so many are opening their eyes to the things which are being achieved. But I say in all seriousness that the achievement of these results depends to a large extent upon the activity of the so-called influential citizens of our country. You are influential if you choose to make yourself so. We do need your activity, your interest and your continued activity and interest, based upon appreciation of the good qualities of those whom you do not know, in order that the cities of our country may be the pride of our country and not its disgrace. I believe we have a chance of achieving better results than those yet achieved in Europe, because we seem to know how to combine individualism and combination, and because we find in our poorer quarters, what we do not find in Europe, a certain amount of resolution and hope to which we can appeal. But it must be because we all unite to achieve results.

Sewage Purification by Bacterial Action.

By Harrison P. Eddy.

MANY of the processes of nature are exceedingly interesting and are operating in every direction, and yet are not understood and recognized until some special necessity compels research which develops the potent forces and adapts them to the needs of the occasion. Such has been the history of the minute living organisms now known and utilized in many technical and scientific undertakings.

The fact that these organisms are very small—indeed, so small that it is with the utmost difficulty that they can be studied, even with the aid of the highest power microscope and indirect methods by which colonies of the same species rather than individuals of the same species are brought under observation—is one substantial reason for the delay in discovering their utility.

There is a very general impression that all organisms are harmful. It has been proved beyond doubt that contagious diseases are caused and transmitted by germs, but it is also true that there are other germs which are of vital importance to nature and to man as the beneficiary of nature. While on the one hand hostile bacteria cause the spread of tuberculosis, diphtheria, typhoid fever and cholera, on the other hand the manufacture of vinegar, yeast, cheese, and various brewed articles is absolutely dependent upon the micro-organism.

While these organisms are very minute they have a remarkable power of multiplication, so that under proper conditions a single organism may develop to millions within an incredibly short time. It is because of their re-

markable ability to multiply that they can accomplish such vast undertakings.

That matter cannot be destroyed has long been an axiom. If a ton of any matter be burned, dissolved, evaporated, or subjected to the action of any force or agent, there will be a ton of resulting products, no more, no less. Matter may be changed in an infinite number of ways, but it cannot be destroyed nor put out of existence

All living matter is organic in nature. When it dies life leaves it, yet it is still organic. Dead organic matter of any kind, whether of animal or vegetable nature, may be preserved for an unlimited length of time without decomposition if germs are kept away from it. Micro-organisms are the direct cause of decomposition, at first breaking down the complex substances, then attacking the simpler compounds, and finally transforming them into inorganic or mineral matter.

It is interesting to follow the element nitrogen through the cycle of life. Starting with the planting of the corn, it is found that it absorbs nitrogen from the air and the soil. Upon maturity the corn, both the ear and the stalk, furnishes nourishment for cattle. The nitrogenous substances are absorbed by the animal, and having served their purpose are found again in the dead organic matter, which is attacked by bacteria, simplified and transformed into mineral nitrogenous matter, either in solid form or as nitrogen in the form of gas. It is now ready to serve again as the nutriment for the growing grain and repeat the cycle, having lost no portion of itself throughout these many changes.

In nature all dead organic matter is undergoing decomposition and change into mineral substances. This transmission from the organic to the mineral is the direct result of the life processes of micro-organisms. In recent years the progress made in research along these lines has been such that some of these processes are becoming known, and methods of controlling, adapting and facilitating them are being devised. The industries which for years were dependent upon the unrecognized work of micro-organisms have now been brought down to a scientific basis, so that definite results follow well-laid plans based upon thoroughly proven theories. Much has been accomplished along these lines in the solution of various problems connected with water-supply and sewage-disposal.

It is evident from these facts that any method of sewage-disposal must be confined to the transforming of organic or objectionable matter into inorganic or harmless substances, and that it is useless to attempt to destroy any existing material.

The bacterial process of transforming organic matter of sewage into mineral matter which is not susceptible to putrefaction may be divided into two parts, which are radically different and which may be and possibly can best be accomplished under entirely different conditions. The organic matter first undergoes deoxidizing putrefactive decomposition, and then is subjected to oxidizing action, which completes the transformation. As in combustion the products are both gaseous and solid in form, nitrogen, marsh gas and carbonic gas being formed in large quantities.

Intermittent Filtration.

The first method of sewage disposal by bacterial action to be studied and applied along scientific lines was intermittent filtration, and the best work upon it has been done in this State. Particular credit is due the State Board of Health for the valuable studies made upon this process.

Sand serves as a good filtering material, and is most commonly used, although cinders, broken stone, slag, or many other materials would do as well. The filtering material is not the potent factor in the process, but simply the factory in which the germs perform their functions. A sand which is coarse and of uniform size of grain is best adapted for sewage filtration, and should contain as high a percentage of air spaces or voids as possible.

The filters are usually about one acre in extent, and are partitioned off from each other by earth dikes, which often

are built of the loam and soil originally overlying the sand, but which must be removed, as it is too fine to act satisfactorily as a filtering material. In these dikes are laid the pipes for conducting the sewage to the filters as well as drains for carrying the filtrate away. The surface of the filters is graded level. Sewage is delivered to the beds from the carriers in the dikes in various ways, perhaps the most common being by four pipes emptying into the four corners of the bed. Ditches and troughs are sometimes used to distribute the water more uniformly over the surface. After a sufficient quantity of water has been discharged onto the bed the gates are shut, and the flow turned onto another filter.

The suspended or floating matter in the sewage is held on the surface of the sand. The water percolates down through the sand to a depth of from four and one half to six feet, where it is collected by a system of underdrains, which conduct it to the main drains in the dikes, thence running to the point of discharge into a neighboring body or stream of water.

Bacteria which are found in very large numbers in the sewage live and propagate in the sand, in the upper layers of which the putrefactive process is paramount, and in the lower layers oxidation is carried on. When the putrefaction and oxidation are complete and all dissolved gases liberated, the resulting filtrate will not putrefy further or evolve the slightest offensive odor.

Since, as has been pointed out, the putrefaction process is one of deoxidation, it is obvious that the presence of oxygen is in no way necessary to its success, if, indeed, it is not actually detrimental. On the other hand, as the process carried on in the lower layers of the filter is one of oxidation, it is evident that oxygen must be furnished from some source. It is for this purpose that the filter is operated intermittently, as is implied in the name of the method. In this way the filter acts much like the lungs, taking in a supply of oxygen, using it in the purification process and exhaling the resulting gases.

As bacteria are living organisms, it follows that they are vitally affected by variations in temperature, chemical reagents, supply of oxygen, and many other conditions of environment. Extreme cold greatly decreases the efficiency of their action. This, however, is not so serious a matter as might be expected, because of the fact that sewage rarely falls below 50 degrees Fahrenheit, and at that temperature it readily finds its way into a clean filter, and the organisms are enabled to perform their functions.

As already explained the soluble organic matter is changed into mineral matter during the passage of the water through the sand. Some of the solid matter which is retained upon the surface of the filter is decomposed and transformed in the same way. Much of it, however, decomposes so slowly that it accumulates until the layer becomes thick enough to prevent the water from entering the sand. At such a time the bed is allowed to fry out, and this material is carefully scraped off the surface of the sand, after which the filter goes on with its work unimpaired. There is very little accumulation of organic matter below the surface of the sand, and there is no apparent reason why the filter should not go on doing its work for years without any renewal of material other than a small amount to maintain its proper elevation.

Septic Tank.

The solid matter which accumulates upon the surface of the sand-filter greatly reduces its efficiency, and several methods of removing it from the sewage have been adopted.

It has been pointed out that the first step in the purification of sewage is to decompose and putrefy the organic matter, and that the process is one for which oxygen is not necessary. The solid matter may be removed from sewage to a very considerable extent by passing it slowly through a settling-basin, to the bottom of which the suspended matter settles.

The bacteria, which are always in the sewage, are of course acting upon the organic matter during the time it is in the settling-basin, and particularly upon this accumulation of sludge.

Much of the solid organic matter is decomposed into gaseous and soluble substances. This prevents a large quantity of sludge from accumulating in the basin, and constitutes one of the chief attainments of the septic tank. The sewage as it leaves the basin is generally foul-smelling, dark colored, and highly polluted. It is not suitable to be discharged into a body of water unless that body is of sufficient size to furnish very large dilution. Intermittent filtration renders this liquid quite free from objectionable properties.

Septic-tank treatment, while yet in its infancy, is likely to prove of value in the disposal of sludge at moderate expense.

Contact Filters.

It has been pointed out that the organic matter in the sewage is acted upon by bacteria while it is passing over the particles of sand which compose the filter. It is obvious that time is required for the action to take place, and special filters have been particularly designed to furnish conditions for the growth of organisms and for sufficient contact between them and the sewage.

These filters are composed of coarse material, varying in size from that of pea coal to that of stove coal. They are usually constructed within cement-lined tanks or beds so that they are substantially water-tight.

Contact-beds may be arranged in series of two or three filters, the effluent from the first flowing onto the second, and thence to the next, if the series is carried further.

The sewage or septic-tank effluent is turned into the first contact-bed, in which it is allowed to remain for a definite length of time—perhaps two hours. Gates are then opened, and the water drained out onto the second bed, where it is allowed to remain in contact with the germs for another definite period of time, and is then drained off. After emptying, the filters are allowed to rest for a short time so that the bed may recuperate and absorb oxygen, for another season in contact with sewage.

Continuous Filters.

While it has been shown that both contact-beds and intermittent filters require time in which to consume the organic matter put upon them, recently efforts have been made, with some degree of success, to operate filters continuously. This is accomplished by sprinkling the sewage over the surface slowly enough so that the water will disappear from the surface as rapidly as it is put on, in this way ensuring a supply of oxygen to the filters at all times. One of the difficulties of this method is to find a practical means of sprinkling the sewage upon the bed.

Of the various methods of filtration or bacterial disposal of sewage, the intermittent has been most thoroughly tried, and under favorable conditions is doubtless the best. The results obtained by the contact system, while quite good, are not equal to those produced by intermittent filtration, and the continuous method is hardly perfected to that degree which will warrant confident prophecy. By either of the first two methods a filtrate should be obtained, under ordinary conditions, which should not undergo decomposition sufficiently to cause a nuisance, even with very moderate dilution of the effluent.

Worcester in the Spanish War.

CITY GUARDS, COMPANY A, 2d REGIMENT, M. V. M.

CAMP WYKOFF AND HOME.

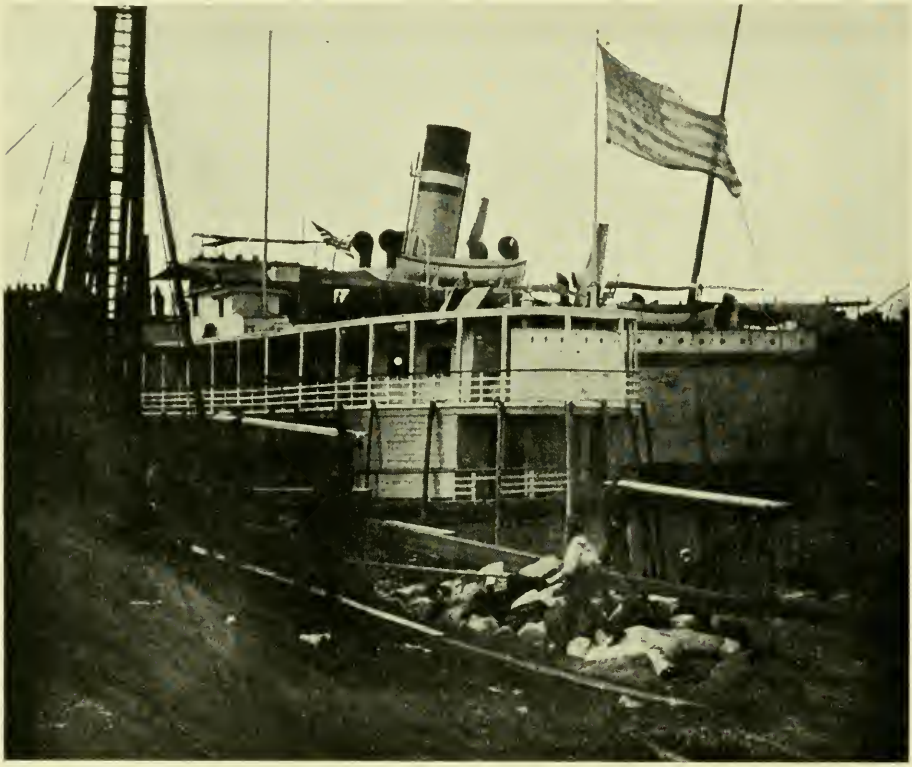
PART VIII.

THE morning of the 19th of August revealed the eastern extremity of Long Island, N. Y., known in geography as Montauk Point; and an unobstructed sight of any part of God's country gave satisfaction to the fever-stricken soldiers, but an immediate landing was out of the question, since a hunt for yellow-fever symptoms must be had before terra-firma can be touched. As a preliminary all the men are drawn up in line near their respective quarters, and quarantine physicians carefully inspect each jaundiced voyager. Fortunately, Company A reveals no suspect, so all may go ashore as far as the yellow danger is concerned. While the inspection is in progress, Captain Barrett, realizing how anxious the folks at home would be to know how the boys had endured the return trip, wrote certain words upon a strip of paper and, wrapping the same around a silver dollar, threw the missile to an apparently honest party, with the statement that he might retain the change after forwarding the message by telegraph. This telegram was to Mrs. Barrett in Worcester, and was as follows: "Every one in Company A alive. Please notify papers." This message, received and given to the local press, was the very first intimation that Worcester had of the condition of the returning company. On this day, only the sick left the boat, but papers and letters from home and the outside world were received.

LIEUT.-COL. EDWIN R. SHUMWAY.

The 20th brings the real debarkation, and as usual, when anything of the kind was to be done, the captain of A Company had the task of superintending the unloading. Selecting men from each company, and with forty stevedores, the work was begun, and progressed steadily till, at 4 P. M., every man was off the boat. Those unable to walk had been sent forward in wagons, and the transport itself was swept and garnished in an unusual manner. Recognizing the merit of the work, the

skipper of the craft made a present to the captain of a nice cane-seated deck-chair, a utensil highly appreciated in the following days of Montauk stay, though Captain Barrett had little time to occupy it himself. At 4 o'clock, the last load was started for camp, and "good-by" was said to the Mobile. Detention camp may have been a mile from the landing-place, but in the men's condition the distance seemed much greater. Confusion ruled supreme, and few appliances necessary to camp life were at hand. The tents were small and insufficient, while the elevated site of the camp gave the wind full sweep, a liberty it was not slow to take, and, coming as it did at a temperature frequently as low as 65 degrees Fahr., it played havoc with boys acclimated to the torrid 100 degrees and over of Cuba. Had the government sent the transport to some southern port and thus accustomed the returning invalids gradually, very likely men might be alive to-day who then succumbed to the strain. As it was, many of those who lived are, after these nearly four years, still hacking and coughing from the bronchial troubles engendered by the easterly winds of Long Island.



THE TRANSPORT "MOBILE."

Remembering nature's first law in the matter of self-preservation, certain thoughtful members of "A" became the possessors of a complete Buzzacott outfit which had been dumped from the wagons. It was true that it did not belong to them, but what booted that so long as it was in use, and used it was constantly. Soon after arriving in camp, there was a distribution of beef,

and the captain, with Private Weixler, set about preparing a meal of toothsome quality for the men, so that before 7 o'clock every man in the company had had a piece of steak, a boiled potato, and a cup of coffee. They then set about the preparation of a soup for breakfast. In the midst of their work they were inspected by certain soldiers, not of "A," who, in whispered words, declared their belief that the cooking outfit was theirs, and also their determination to capture it when a good chance offered. To prevent any such calamity, the plant, when the soup was cooked, was moved into a tent, and a half dozen of the men stood guard over it, ready to "fight till the last armed foe expired," rather than surrender a drop of soup or an ounce of the apparatus. The name of that jolly old rebel, General Joe Wheeler, was given to the camp, and the men proceeded to make the best of their quarantine.

For four days they were detained in this place till, through their failure to develop the yellow scourge, it was deemed safe to let them pass out. During this time the captain of the City Guards was appointed brigade police inspector, i. e., to look after the cleanliness of the camps, and it was no small honor for a captain of volunteers to be thus designated when there were two regiments of Regulars in the brigade. Very likely General Ludlow remembered some of the captain's work in Cuba, and knew that this duty would be done with the same faithfulness. However, his directions were received and executed with the utmost alacrity, requiring in only one instance a quotation of regulations to let the Regular major understand that the inspector knew what he was about. One of the tantalizing features of the detention was the nearness of visiting friends and yet their impassable distance. As with the southern prisons of the Rebellion days, there was a so-called deadline, across which only General Ludlow and the police inspector could go. Long-distance talking was indulged in, however, and kodak possessors shot over the line, the impression received through photography not being considered contagious. On the last day in this place Captain Allen of the Light Infantry, who for some time had been in Worcester on account of illness, came to the regiment, bringing with him a goodly array of both solid and liquid refreshments, which he shared not only with C Company, but with all the Worcester boys. Also this day there was another examination made by the physicians, and some men were sent to the hospitals and thus prematurely home, but at this date it is fair to conclude that they acted in accord with their best judgment.

On the 24th came the orders to leave quarantine, and the men were nothing loath to obey. Packing up was soon done, and then they marched away. The sudden change from the heat of Cuba to the cool air of Montauk did not produce the effect desired; on the contrary many men sickened quickly, and dysentery, malarial and typhoid fevers were very common. Captain Barrett had to look after his own men in the removal, and also see that the camp was left in a proper condition. To this he supposed he had given proper attention, when he was accosted by a young man, possibly a recent West-Pointer, riding a horse and proclaiming himself an assistant inspector. He wanted to know who had the policing in charge, and was informed that he was addressing that officer himself. Whereupon there was an exchange of civilities, in which our Worcester captain lost none of his dignity nor standing, but the young lieutenant did learn

CUBAN VEGETATION.

that even a graduate of the military academy may be at times just a bit fresh. The upshot of the matter was that the assistant informed the captain that he should report him for dereliction and incivility. When General Ludlow inquired of Captain Barrett concerning the interview, he was speedily satisfied that his young officer had displayed zeal without knowledge.

There are only two days of stay in the general infantry camp, but on the 25th come Lieutenant Lücke, D. D. McTaggart, George W. Hubbard and Luke Davis, all from Worcester, the last named being the father of one of the company, and Mr. Hubbard was known to all as the long-time caretaker of the Armory. There are so many rumors of departure for home that few can enjoy the really comfortable appointments of the camp, nor the

food which by contrast seems to be actually luxurious. Mr. McTaggart, formerly one of the Guards, took pictures of the company, some of whose members had changed so much that he did not recognize them. Also the regiment marched before a biograph, and for aught the men know, in some far-away museum, they are marching still. All the arms and ammunition of the soldiers were turned over to the brigade ordnance officer, and those thus giving up their guns were not a little delighted at hearing the officer say that theirs were the only ones in the regiment returned in a fair condition.

If the departure of the Worcester contingent had been thus far the most momentous event in its history, then the story of the 27th of August was to crowd it hard, since this was the day of the home returning. "Let not him that girdeth on his harness boast himself as he that putteth it off." As early as 4.30 A. M. some in the camp were astir, and for his breakfast each man had two boiled eggs, bread and butter with a cup of coffee. Then standing in front of the fire the captain gave to each man a drink of porter or whiskey. Thus supplied it was with almost a springy step these malarial poisoned lads set out for the steamer Block Island, aboard which they went at 7 A. M., an early start, but necessary, if the close of the day were to see the men at home. Lieutenant-Colonel Shumway and Captain Barrett attended to the loading of the boat, and at 7.45 she steamed away from the wharf with her prow directed towards New London.

The Connecticut city was fully alive to the situation, for a sea of faces greeted the arrival of the steamer, and among the dwellers in the city were many who had come down from Worcester to accompany the boys home, among them General Fred W. Wellington. Nor were the attentions of the good people confined to expressions of sympathy, for they knew that hearts are often reached through the stomach, hence the baskets well filled with the finest of food. One lady in particular had repeatedly flitted past the first officer of A Company, and he had noticed the presence of what seemed to be the nicest of chicken sandwiches, but not one did she offer to him. Finally he mustered up courage to ask her what she purposed doing with the contents of the basket. "Why," said she, "I am giving them to the poor soldier boys, just back from Cuba." "Well," says our doughty officer in his most melancholy tone, "what is the matter with giving me one, for I was in Cuba?" Imagine his feelings when the good woman responded, "Oh no, you couldn't have been there, for you are too fat." How little sympathy rotund people receive on their way through the world! 'Tis said, however, that the captain convinced the Good Samaritan that he had suffered with the boys, and so captured his sandwich. Boarding the northward-bound train, the Second Regiment was en route for home via Palmer. At the several stops through the Land of Steady Habits, the hospitality of many coming on the train, however well meant, was in some instances of that excitable nature that the dispensing of liquids had to be forbidden, though coffee and milk were not considered contraband. Generosity even reached the pitch of passing around cigars. At Palmer, there came a separation of the regiment, part going to the westward, while the Worcester companies turned towards the east.

At state line, where the imaginary boundary separates Connecticut and

Massachusetts, Governor Roger Wolcott came aboard, and it was a particularly pleasant thing for him to thus welcome home the survivors of those whom, a few months before, he had reviewed upon their Framingham campground. Passing through each car he gave the boys a chance to know that he had not forgotten them. At Palmer there was a large delegation of Worcester friends with more refreshments. It really began to look as though the people of the sister states

QUINCY E. FORTIER.

had begun to think the boys hollow to their heels, and some of them were reduced to the condition of that newsboy at the charity dinner who could chew, but couldn't swallow. Among the visitors were Dr. A. C. N. Petersen, Dr. E. H. Trowbridge, Lieutenant Lücke, Harry Merritt, and others. Not only did they bring food, but they brought waiters as well, whose duty it was to anticipate every want of the returning soldiers, while the physicians looked after the sick.

It was at 3.45 P. M. that the train rolled into Union Station. Everybody in Worcester who could get there was present to see the boys come home. How pleased they were! Even the long-enduring lions, that for more than a quarter of a century have borne the burden of the wondrous arch, were observed to change countenance as the Worcester boys debarked. The multitude was in a rapturous mood, and was ready to cheer and take each boy to its heart, but when the yellow-skinned, emaciated forms appeared, the shouts died upon the lips of the crowd, and sound gave place to tears. Carriages had been secured for such as could not march, but Company A had decided to walk, cost what it might. On the way down from Palmer the captain had mounted a seat, and, stating the situation, closed by saying, "Now, boys, I propose to walk, how is it with you?" With a mighty cheer they voted to a man to follow their captain. Thus when the train was deserted, the line of march was taken up through the familiar ways, never looking dearer than now as they are returning from the field of danger and honor. Again they are preceded by the dulcet strains from the Battery B Band, while, as of yore, the G. A. R. and the Sons of Veterans act as escort. At Salem square, Battery B salutes them with twenty-one guns, and now, if never before, they are sure that they are of age. Of the sixty-seven men who on May 3d marched away there are fifty-four now in line, all who are not in hospital or for some reason left behind. Lieutenant Plummer, with Privates Fischer and Fairbanks, were left in Cuba; Artificer Clapp, with Privates Forest and Torkelson, are at Montauk in the general hospital, while Sergeant Sawyer, with Privates Christenson and Israel, are in the detention camp hospital at Montauk.

It is a sympathetic mass of humanity that strives for just a glance of the returning brave. "Johnny" was truly marching home again, but he was not coming in the manner outlined in the song. The boys were ready to shout, the men to cheer, and the ladies had all turned out, but these parboiled, hollow-eyed, limping objects were not the beings they expected to see, and how could the throng "feel gay" though really and truly "Johnny" was marching home. Slowly and with halting step the march was made, and, though the flag was there and the music beat upon the air, and the cannon thundered their greeting, somehow the return did not measure up to what had been written and spoken, over and over again, "when the troops come marching home again with glad and gallant tread." Yet every being in that welcoming crowd of citizens was rejoiced to his heart's core that the boys had reached home once more, and only regretted his inability to take each fever-racked body and breathe into it the fire and energy with which it was filled when, four months before, the men had departed. Though pressed upon by the multitude to the point of obstruction, though in many cases every step was fraught with pain, not a man fell out, but each one stuck to his place till the Armory was reached.

When the familiar structure was gained, each company was dismissed to its respective room, and soon Company A is in its own; then follow the greetings and the congratulations and the leave-takings, for Americans separate easily. The captain, who had not been away from his men a day in their whole service, speaks a few words of good-by, till with broken voice, overcome by his emotion, he had to cease, though he did manage to advise his loyal followers to avoid immediately over-eating and drinking, and always a desire to live on their reputations. Then the boys gave their cherished leader three royal cheers, and the day was ended. Before departing for their homes, a brief meeting was held to arrange for the approaching anniversary, but as the men were without equipments, the annual observance was given up, and with propriety, for they had already a memorable celebration. Hacks had been provided to carry the wearied soldiers to their homes, but over the reception accorded each valorous son within the privacy of the domestic circle, the public has nothing to do.

A sixty days' furlough was the boon given to the men, and they made the most of it, though there were some who could not wait the end thereof before embarking upon some enterprise, so inapt is the average American to a life of idleness. Though every man had returned alive to America. September 3d, one of those who had come back to Worcester passed over to the majority; too feeble for the Armory march, he was driven home at once. Henry Beaudoin, known in the company as Boardman, the soldier who had won distinction at El Caney, much to the grief and surprise of his comrades had sickened after reaching Montauk, and so survived his home-coming only a week. A deputation of the company at the funeral was the least that the sorrowing friends could send in memory of one whom they loved. Sept. 30 came the news that George Leon Forest had died in St. Peter's Hospital, Brooklyn, of typhoid fever. Over his remains, which were sent to Worcester, his comrades paid their compliment of presence and recollection. He had been a good and faithful soldier, and all lamented his early death.

A variation in the general trend of

affairs is had when, furloughs having expired, on the 24th of October all hands are ordered to report at the Armory for a term of duty there. For ten days they are to resume the routine of a soldier's life, with the concession of a choice between sleeping there or at home, but all must be on hand for roll-call. Landlord Robert Kessell of the City Hotel has been employed to supply meals, and it does not look like a very severe round of duty to which they are introduced. For seventy-five cents per day for each man he sets an excellent table, and for the nonce the boys almost forget Cuba and its "prime canned roast beef." The duties imposed were not arduous, consisting principally in roll-call, standing guard within the Armory, and an occasional drill, the latter exercise counting as one of the cardinal virtues in the mind of the captain. During the interval between the return and the muster-out, the officers adequately bestowed the time in making out the rolls, accounting for property, etc.

November 2d there was a meeting of the company to consider varying phases of the proposed muster-out, as to pay, etc., but from the gathering nothing came, since the government took the entire matter into its own hands, and did with the men as it liked. On the next day came the momentous trip to Springfield. The train was taken in Union Station at 6.33 A. M. At 9 o'clock came a parade of the regi-

R. H. Brigham. Jas. A. Cole. H. C. Grover. C. S. Higginbotham. Sergt. C. A. Poland.

ment, which was reviewed by the governor and staff, the mayor of Springfield, and the city government, thus gradually reaching the auspicious moment of final and effectual release, which came to Company A at 11.20 A. M. in the Howard Street Armory, our City Guards being the very first to receive their muster-out at the hands of Lieutenant Edmunds of the United States Army.

Thus ended the nearly six months of service for the nation. The men went to Springfield as soldiers, each and every one under authority; they returned as citizens, owing obedience to no one or thing save the general laws of the land, but very likely to be better men for the discipline of service. They took a stipulated morning train under orders; they returned when they chose. The City Guards had done their duty, had responded in the day of national peril, and while there was no long roll of casualties upon the battlefield, each man felt that he had done his duty, and that the campaign of 1898 in the Spanish War had added to the laurels of Worcester in war.

The following is the list of all names connected with the company during the war, and, as far as possible, the present residence and occupation of each man. Unless otherwise stated, the state is Massachusetts; the place, Worcester:

Captain Edwin G. Barrett, boot and shoe merchant.

First Lieutenant Moses H. Tisdell, salesman.

Second Lieutenant William H. Plummer, Second Lieutenant Fourth U. S. Infantry.

First Sergeant Walter H. Allison, Torrey Razor Shop.

Sergeant Charles A. Poland, last factory, Church street.

Sergeant Edward R. Riedl, died Oct. 21, 1900, aged 30 years; his body is buried in Worcester.

Sergeant John G. Gowans, paperhanger.

Sergeant Elbridge B. Sawyer, electrician.

Sergeant Jas. T. Cruikshank, driver.

Corporal Ralph L. Allison, traveling salesman.

Corporal Archie F. Murray, machinist.

Corporal John G. Hagberg, legislator and law student.

Corporal Howard K. Hobbs, registry of deeds office.

Corporal Herbert R. Fay, laundry, Los Angeles, Cal.

Corporal Alexander G. Thomson, clerk, Newport, R. I.

Musician Frederick C. Gagnon, clerk, market.

Musician Walter A. Traver, valentine factory.

Artificer Samuel E. Clapp, machinist.

Wagoner Walter T. Bruso, traveling salesman.

Private Herbert B. Abbott, U. S. A., Signal Corps, Philippines.

Private George E. Allison, machinist.

Private Herbert A. Ballou, paints and oils.

Private Charles A. Barton, electrician.

Private Joseph H. Boardman, died Sept. 3, 1898, aged 23 years; his real French name, Beaudoin, was Englished as above when he enlisted.

Private Ralph H. Brigham, art store, Southbridge; Second Lieutenant, Company K, 6th M. V. M.

Private Philemon Brulé, moulder.

Private John T. Brusky, steamfitter, Providence, R. I.

Private William E. Cardin, unknown.

Private James A. Cole, blacksmith.

Private Henry G. Coley, clerk, boot and shoes.

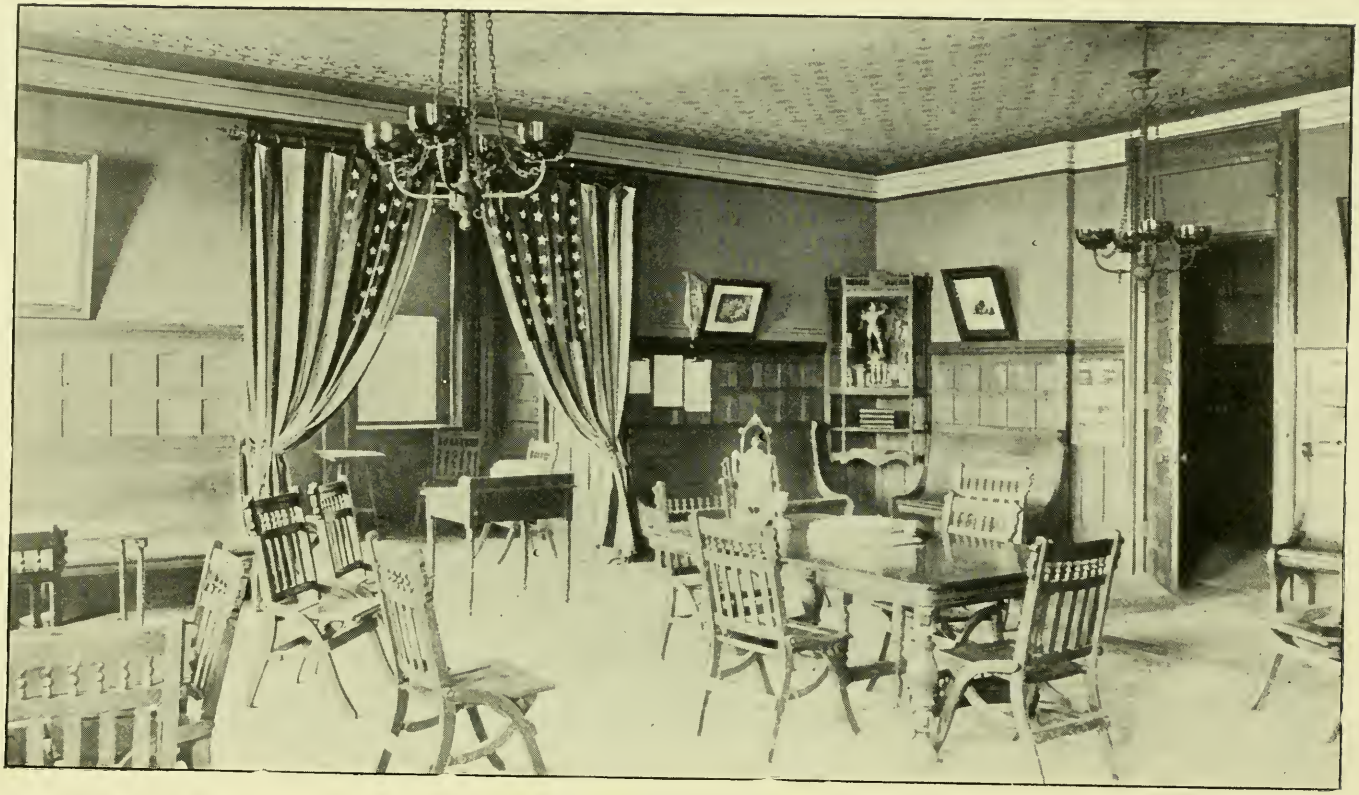
Private Benjamin Cooper, carpet factory.

Private William G. Cornwell, machinist, New London, Conn.

Private Elmer I. Christenson, U. S. Army.

Private Orlo W. Davis, trucking.

Private Frank L. Fairbanks, First Sergeant U. S. A., Philippines.



Rooms of Company A in the Armory.

Private Lewis M. Fay, died Los Angeles, Cal., Dec. 31, 1901.

Private Charles A. Fischer, salesman.

Private George L. Forest, died Sept. 30, 1898.

Private Quincy E. Fortier, druggist, Charlestown.

Private Frank E. Gale, foreman.

Private Ralph C. Green, clerk, market.

Private Henry C. Grover, artist, Boston.

Private Ernest B. Hall, electrician.

Private Thomas H. Hammond, U. S. Army.

Private Frederick R. Hays, clerk, market.

Private Arthur L. Heyward, U. S. Army; was in China.

Private Charles S. Higginbotham, American Steel & Wire Company.

Private Simon Israel, dry goods, Westboro.

Private Albert Johnson, machinist.

Private Walter R. Johnson, motorman.

Private Joseph T. Laflamme, valentine factory.

Private Charles F. Lamberton, tinsmith.

Private Julius H. Lowell, baggage-room, South Station, Boston.

Private Arthur C. Magee, Worcester Fire Department.

Private Rufus J. Martin, driver.

Private Arthur G. Mills, machinist.

Private William E. Moody, American Steel & Wire Company.

Private William H. Morse, druggist.

Private Frederick G. Newell, electrician.

Private Albert J. Reinbold, salesman.

Private William W. Rice, motorman, Jersey City, N. J.

Private Walter E. Schofield, U. S. Army.

Private William M. Severy, pool-room.

Private William E. Sherman, machinist.

Private James W. Smith, Amherst College.

Private Arthur T. Squires, conductor.

Private Louis O. Standish, U. S. Army; one of those who scaled the walls of Pekin.

Private William G. Standish, machinist.

Private Quincy F. Thomas, machinist.

Private Reinhard A. Torkelson, U. S. Army.

Private William T. Turner, carpet factory.

Private Samuel A. Wallace, motorman.

Private Carl W. Weixler, machinist, Quincy.

Private Bert E. Wheeler, driver.

Private Peter N. White, Worcester Fire Department.

Private Alfred M. Wills, machinist.

Private William S. Young, stereotyper.

Could the Frenchman, De Rochambeau, who helped our people in the days of the American Revolution, read the foregoing list, all the more might he exclaim, "In America, no men are soldiers by trade, but men of all trades are soldiers."

[The end of Company A.]

The Ornithologist.

Begun in a very modest way, the above-named magazine, published by C. K. and C. A. Reid at 75 Thomas St., has become a necessary adjunct to all those who wish to excel in local bird lore. Father and son are equally devoted to their vocation, and the magazine grows not only in interest, but in deserved circulation.

Educational Notes

Polytechnic Institute.—The thirty-second annual commencement was celebrated in Boynton Hall June 12th, at which forty-four young men of the class of 1902 were given the degree of Bachelor of Science, and two others of the class of 1900 the higher degree of Master of Science. The forty-four men who graduated this year represented but fifty-two per cent. of the men that started with the class four years ago, a fact which indicates in some measure the strenuousness of the course. It is gratifying to Worcester people, and especially to the High School teachers, that of the twenty-two young men who prepared at the Worcester High School and entered with the class of 1902, all but two have graduated. One Worcester boy, who belonged to the class of '98 in the English High School, was able to obtain one of the six honors. Most of the men have been prominent in athletics, in class politics, on the editorial boards of the W. P. I. Journal and the class Aftermath, and in other student organizations; and all stand well in the class as regards scholarship.

The commencement address was delivered by Dr. John K. Rees, Professor of Astronomy at Columbia University, his subject being, "Some Recent Progress in Astronomy." After the address the degrees were conferred by President Engler, and then Hon. Stephen Salisbury, President of the Board of Trustees, awarded the $75 prizes to the six honor-men as follows: Carl Henry Au, Washington, D. C.; Paul Bertram Spencer, Brooklyn, Conn.; Leonard Day, Fitchburg, Mass.; Stephen Lyman Tabor, Longmeadow, Mass.; Winthrop Goddard Hall, Worcester, Mass.; Charles Sumner Ross, Hopedale, Mass.

The baccalaureate sermon was delivered this year by Dr. Willard Scott at Central Church, the prayer on this occasion being offered by Rev. Daniel Merriman, who had returned from Europe for the commencement exercises only two days before. The members of the senior class occupied reserved seats in the front of the church, and were ushered in by Mr. James Logan of Central Church, a member of the Board of Trustees of the Polytechnic.

Class Day was celebrated this year at Lake Washacum in Sterling. The day was spent in baseball, bowling, boating, swimming, roller-polo, etc. At noon the farewell class banquet was held, followed by a business meeting. The committee had made very complete arrangements, and the class passed a very enjoyable day.

Prof. A. Wilmer Duff, M.A., D.Sc. (Edin.), who occupies the chair of Physics at the Polytechnic, delivered the annual commencement lecture before the Washburn Engineering Society Tuesday evening, June 10th. Dr. Duff's subject was "Wireless Telegraphy, the Telegraphone and the Telephonic Arc-light," and the lecture was illustrated by a large number of very interesting and difficult experiments. After the lecture the senior electrics gave an exhibition of their thesis apparatus for the transmission of high potential electricity. The illumination was quite spectacular.

The alumni reunion was the largest and one of the most successful ever held at Tech. Caterer Brigham served a seven-course dinner, after which President John M. Russell of the Alumni Association introduced Mr. James Logan as toastmaster. President Engler made a splendid address, telling of the progress of the Institute, its plans and its needs. He also asked the alumni for a further endowment of half a million dollars; and steps were taken later to raise it. The members of the graduating class, who still have college debts to pay and salaries to earn, pledged on this occasion the sum of $1003 toward the building fund of the new Alumni Hall.

Preparations are now under way to connect Boynton Hall with the central heating plant. Electric lights will be installed in all the rooms and laboratories where they have not yet been placed, and the campus will also be lighted by electricity.

Applications for membership in the next freshmen class are more numerous than in any year preceding. With a considerable increase of students and the erection of new buildings, next year promises to be one of great success.

Preparations are being made by the Young Men's Christian Association of the Institute to take a large delegation to the students' conference at Northfield this summer, June 27th—July 6th.

WORCESTER WOMAN'S CLUB

PRESIDENT, GEORGIE A. BACON.

VICE-PRESIDENTS, MARY C. DODGE, NELLIE F. ROGERS.

CLERK, MINNIE L. EDDY. CORRESPONDING SECRETARY, FLORENCE S. SLOCOMB.
TREASURER, LIZZIE M. BASSETT. AUDITOR, ALICE G. MERRILL.

Elective Members of Executive Board.

CARRIE G. LELAND, GEORGIE A. BACON, ALICE M. CHENEY,
SARAH L. DRURY, HARRIET C. BLISS, ADELE B. TUCKER.

Finance Committee.

MARTHA A. EDDY, MARY A. HARRIS, OZAYIER W. TURPLE.
LIZZIE M. BASSETT, *Treasurer ex-officio.*

Heads of Departments.

CARRIE GORDON LELAND, *Literature.* ADELAIDE M. SWASEY, *Science.*
CARRIE KING HUNT, *Art and Music.* JOSEPHINE C. CUTTER, *History.*
ANNA S. THOMPSON, *Education.* FLORENCE E. W. BLISS, *Work.*
MARY C. DODGE, *Miscellaneous Topics.*

The programme of the Woman's Club meeting on May 28th was in charge of Mrs. Josephine C. Cutter, chairman of the history department. There were songs and readings from celebrated authors as follows: "Battle of the Plains of Abraham," Parkman, by Mrs. Minnie L. Eddy; Lincoln's "Address at Gettysburg," by Mrs. Isadora P. Brockway; Motley's "The Destruction of the Spanish Armada," by Mrs. Abbie L. Stone; Victor Hugo's "Waterloo," by Mrs. Emma A. Porter, and Tennyson's "Ballade of the Revenge," by Mrs. Annie R. MacMurray. Mr. Harry Robinson rendered several vocal selections.

At the meeting of the Worcester Woman's Club, June 4, memorial exercises were held in memory of Miss Sarah A. Henshaw.

The exercises were conducted by Miss Cora L. Greene. Mrs. Melora F. Pratt read a paper on "The Life of Miss Henshaw," written by a former club-member, Mrs. Emma E. Foster. The club's memorial was written and read by Mrs. Eliza D. Robinson. Mr. Henry B. Blackwell also paid a tribute to the memory of the friend of many years, and read a poem written for the occasion by his daughter, Miss Alice Stone Blackwell. Miss Greene reported $262.65 received for vacation schools as a memorial to Miss Henshaw. The exercises then closed with the reading by Mrs. Marianna M. E. Brown of George Eliot's "Oh, May I Join the Choir Invisible?"

The following were elected delegates to the meeting of the Massachusetts State Federation in Wellesley June 12: Miss Cora L. Greene, Mrs. Anna L. Thompson, Miss Lizzie M. Bassett, Miss Annie Lovell, Mrs. Minnie L. Eddy and Mrs. Helen M. Fowler. The President is a delegate by virtue of her office.

The Club has lost from its rank a valued member by the death of Mrs. Mary C. Staples, who had been a member for many years.

At the annual business meeting reports were read from the chairmen of departments and from Committees on Extension Work, Entertainment, Public School Art League, and the Consumers' League, and the President read a very full report of the delegates to the biennial meeting of the General Federation of Women's Clubs in Los Angeles. Appropriations were made for expenses of officers and extension work. The following were elected as delegates to the Consumers' League: Miss Mary W. Lincoln, Dr. Mary V. O'Callaghan and Miss F. Lillian Barber. Mrs. A. Louise McCullagh was elected to fill the vacancy caused by the death of Miss Henshaw, on the Committee on Public Schools.

At the annual meeting it was voted that at the December business meeting the question of withdrawal from the General Federation be discussed. The Extension Work Committee are Mrs. Mary C. Scott, chairman, Mrs. E. R. Brownell and Mrs. S. A. Tateum. Two vacancies on this committee are to be filled.

Among the many classes that have been carried on by the various departments of the Woman's Club during the past season, one, the class in forestry, has been a distinctly new departure. The science department of the Club

considered such a class justified by the growing interest in this subject of forestry, as shown by the frequency of its discussion in the public press, the formation of forestry associations throughout the country, and the agitation of forestry measures in the national and state legislatures. This interest can be understood only by those who know something of the facts connected with the physical life of the tree. The very general demand now being made in this country for the preservation of the forests has for its basis something more than the mere sentimental or æsthetic interest in the trees themselves. It has a severely practical foundation in the knowledge that the forest has a vital connection with our supplies of soil and water. We have but recently awakened here to a realization of the danger we are in from the loss of our forests. In the old world where conservative forest management has been practiced for more than a hundred years, a knowledge of the value of trees and interest in their preservation are widely disseminated, but in our country there is much need of public instruction in this subject, and in several places the women's clubs have taken up this work. Last fall a class in forestry was announced in Worcester under the leadership of Miss Arabella H. Tucker of the State Normal School. Eighteen members were enrolled, and meetings were held on the first Monday of each month from October to May. The subjects considered at these meetings will show the scope of the course: "Physical Life of the Tree," "Evolution and Distribution of Trees," "Trees and Climate," "Economic Value of the Forest," "Scientific Forestry," "Forest Legislation," "Trees in Literature." In addition to the main subject, short papers were presented at each meeting by members of the class on such topics as "Historic Trees," "Trees in Folk-lore," "Trees from the Artist's Standpoint," "Trees of Shakespeare," etc. The course ended with an outing in the woods of the Tatnuck Country Club by the invitation of one of its members, where a large number of species of trees may be observed. As an outcome of the forestry course, a good-sized class has been formed for out-of-door study of trees during the month of June. Weekly meetings are held in localities where trees abound, and the different species are studied.

The interest felt in the forestry class has been such as to warrant the committee in announcing the subject again among next winter's classes, though what form the course will take is not yet decided.

"Give these, I say, full honor and glory,
For daring so much before they well did it."

These words, with which one of our members dedicated to the class her first "Browning paper," may well serve as the heading for this chapter in the history of the "Woman's Club Browning Class."

In the winter of '96-'97, in response to an invitation to those desiring to form a class for study of the poetry of Robert Browning, about twenty ladies organized for that purpose, with Miss Eleanor Whiting as leader. The poems on "Music," "Art," and "Woman" were studied, and papers prepared by members of the class on "A Comparison Between Browning's 'Bishop of Saint Praxed's' and Tennyson's 'Palace of Art,'" "Comparison Between Browning's Treatment of Women Characters with that of Shakespeare," "Browning's Conception of Art."

A fourth paper on the "Music Poems" was read at a social gathering at the house of the leader, and completed the programme for the year.

The second season opened with the study of the drama, "Pippa Passes," followed by poem on "Religion, Art, and Love." The chairman of the literature department, Mrs. Annie R. MacMurray, was also an enthusiastic member of the Browning class, and to this fact we owe the exceedingly rich programme which we enjoyed all this time.

Philip S. Moxom, D.D., of Springfield, was secured, not only for the regular Club day, but for three additional ones, and we had the inspiration of his ideal rendering of the grand poems "Saul," "Caponsacchi," "A Death in the Desert," "Rabbi Ben Ezra," and the Italian patriotic poems of Robert and Elizabeth Browning.

While accepting the words of our poet, "Oh, the little more, and how much it is!" the chairman, confident that "a little more" Browning might be safely administered, repeated, by request, on "Members' Day," the programme which had closed the previous season. The paper, "Robert Browning, the Poet Musician," was given with musical illustrations of great merit by Mrs. Brand and others, and readings of the poems, which gave much pleasure to all present. The following season was occupied by a course of lectures by Rev. Dr. Moxom on "Sordello," the public being privileged to attend.

The fourth season was devoted to the study of the "Ring and the Book." Miss Vida Scudder, Assistant Professor of Literature at

Wellesley College, gave five lectures, and assigned topics for special study, meetings for which were conducted by Miss Whiting. Among a number of interesting papers, one on "Browning's Ecclesiasticism" was of special merit.

The year closed with a tea at the home of the leader, given by the Executive Committee (Miss Whiting, Miss Lewisson and Mrs. Robinson). It was with sincere regret that at this time we were obliged to accept the resignation of Miss Whiting on account of ill health. During the four years she had proved herself a leader, efficient and tactful, and had won the affection of all. We were fortunate in securing for her successor Miss Lucy Lewisson, who has for two years most successfully filled the office. Under her faithful and able direction we have studied "The Dramas," and Rev. Dr. Hornebook has lectured upon "Loovia," "The Return of the Druses," "A Soul's Tragedy," "In a Balcony," "Strafford," "King Victor and King Charles," and "Paracelsus." These scholarly addresses have been helpful and stimulating, and the papers prepared by class members of unusual merit. The results of the two years of study are very gratifying, and we deeply regret that we can no longer avail ourselves of the guidance of our present leader.

In view of the great advantages which the members of the class have enjoyed, it is with a confidence which savors of rashness that we venture to sail our craft for the present without a pilot. Browning's "Treatment of Nature" forms the scheme of work for the coming season, and much pleasure is anticipated from the study of this new aspect of our many-sided versatile poet.

A very pleasant feature of the Browning class has been the delightful *esprit-de-corps* which has prevailed since the beginning, and which we hope will continue to be a characteristic of the class. Miss Whiting, Miss Lewisson, Mrs. Robinson, Mrs. E. M. Gould-Smith and Mrs. Sprague have entertained the class, in addition to several social occasions under the management of the members themselves.

E. D. R.

As Others See Us.

Weimar, June 2, 1902.

Alfred S. Roe, Editor WORCESTER MAGAZINE,
Worcester, Mass.

Dear Sir: I have received a copy of your MAGAZINE for March. The principle to which it is devoted is, in my opinion, the most vital one that American citizens can work for, namely, municipal reform and good citizenship.

I shall give your publication a prominent place on the consulate reading table, if you will favor us with a copy.

With best wishes for the noble work you have undertaken in this direction, I am, sir,

Very truly yours,

THOS. EWING MOORE,

U. S. Consul.

Glauchau, Germany, June 2, 1902.

The Board of Trade, Worcester, Mass.

Dear Sirs: I beg to acknowledge the receipt this day of the March number of your very interesting MAGAZINE. You are to be complimented, for a publication of this character should accomplish much good, and, at the same time, bring large returns to the city .

I have the honor to be, gentlemen,

Your obedient servant,

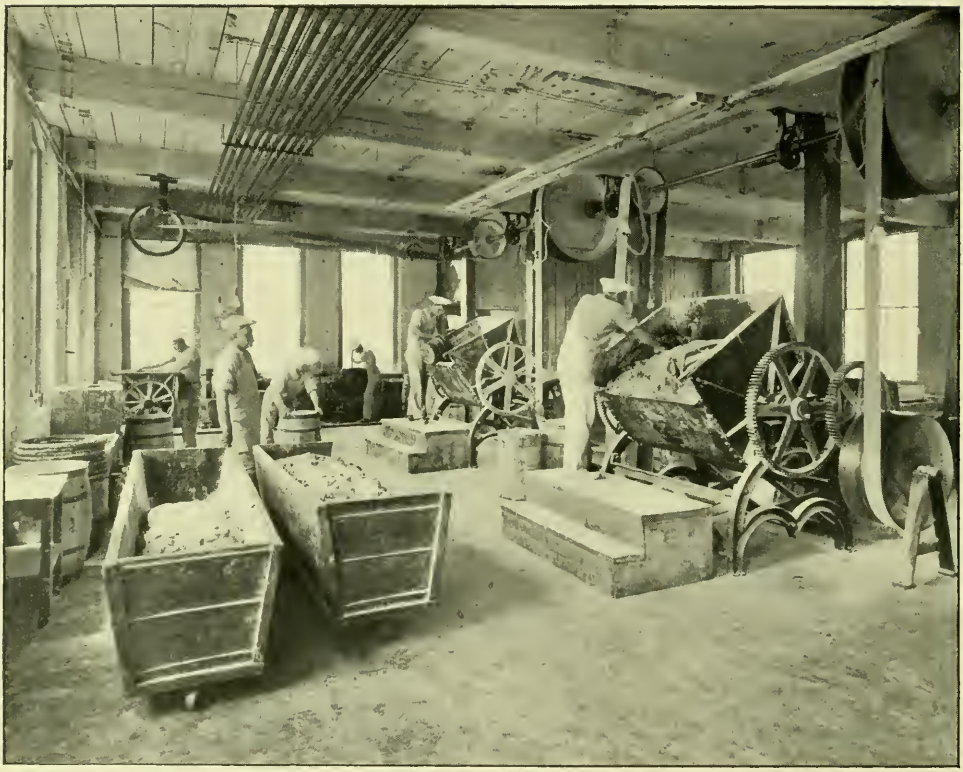
E. A. CREEVEY,

U. S. Consul.

Worcester Industries.

III.

THE MAKING OF BISCUIT.



MIXING-ROOM.

Our dependence upon food renders the exercise of eating one of vital and oft-recurring concern. Men have often held that not only were the bodily wastes repaired, but the mind and the feelings were tempered by our daily food; and in contemplation of the grasping ambition of the great Roman Emperor, Brutus was moved to inquire in the name of all the gods, "Upon what meat doth this, our Caesar, feed?" We not only eat to live, but much of our living is devoted to the art of eating. We may agree with good old Matthew Henry that "bread is the staff of life;" but we have long since outgrown the Puritan saying that "brown bread and the Gospel is good fare." In these days one relies on

> "Epicurean cooks
> To sharpen with cloyless sauce his appetite,"

and the "chef" is not only an important product, but an important factor as well in our civilization.

The simple Indian cake dried upon a board rather than baked, the clumsy Dutch oven that roasted one side at a time, and the cavernous brick oven, are all faint reminiscences of early New England life, when the housewife

performed the week's baking of bread and pies, with an occasional fancy cake or a raisined bun to reward the boys who had fed the lambent flames with fagots and watched them circle the arched walls and shoot up the flue in front. Do not the nostrils of such an old boy to this day sniff in imagination the delightful odors of the golden loaves as the cook with a long pole shifted them over the heated floor of the oven?

To-day the great biscuit-factories and bakehouses with their intricate machinery, their division of labor and their application of science to the art of bread-producing, have not only lessened its cost, but have increased the product in a bewildering variety.

The traveler who passes the isolated building east of the railway station of our city bearing the legend, "Your health depends on what you eat," with the massive sign of "The Cartwright-Borden Co.," hardly realizes that here over one hundred barrels of flour are daily consumed in the production of nearly three hundred varieties of fancy biscuits; and upon a visit to the interior, he might well reverse the exclamation of Shakespeare's Prince Henry as he beholds "this intolerable deal of *bread*" from the plebeian biscuits which Americans persist in calling "crackers" to the attractive cartons in resplendent labels bearing the names "Assorted Rosebuds," "Cranford Teas," "Currant Wheels," "Iced Grandmothers," "Birds' Nests," "Fig Dessert," "Little Brother's Lunch," "Home Week Cakes," and scores of others perhaps less striking, but indicative of some characteristic of size, shape or flavor.

BAKE-ROOM.

Visiting the mixing-room, especially, in company with Mr. Cartwright or Mr. Borden, who have become familiar by long experience with all the intricacies of bread mixing and baking, one learns many unsuspected facts which underlie the successful prosecution of the business. He is told that even the flour requires

"tempering" by intermingling several brands, the flour grown in different sections having peculiarities of its own due to climate, soil and many occult causes but little understood; and the mixing of different flours for the sponge which is set in long, wooden troughs or "throes" is one of the arts of an efficient foreman. From the throes the sponge is mixed in huge machines, each with a capacity of eight barrels of flour, in which rotating spiral blades churn and twist the mass of dough in endless contortions.

In the bake-room, however, the application of machinery has been carried to its highest perfection, and the Cartwright-Borden factory is perhaps the most interesting of any in the country to the visitor, as the present plant has been but recently installed and all the mechanical appliances are the latest and the best known in the industry. Preparatory to the cracker-machine, the dough is put through a "brake," which rolls it into a thin sheet, which is repeatedly doubled upon itself and rerolled to secure the uniform blending of its ingredients, the operator being called a "former." The form is then transferred to the cracker-machine and rolled to the desired thickness of about one-quarter inch and delivered to an intermittently moving belt, which passes the thin sheet of dough beneath the vertically reciprocating cutters, consisting of slightly oval dies with their longer axes parallel with the moving belt; "dockers," or sharp-pointed needles, which pierce the dough; and "clearers," which push it from the dies as they rise and impress any desired inscription upon the plastic mass. Leaving the cutters, the shreds of dough are removed by a scrap-boy, and the crackers, gathered on a large, thin, wooden shovel by a "peeler," are deposited upon the heated pans, carried upon the arms of a revolving reel in the mammoth oven, where the temperature, indicated by a pyrometer and uniformly maintained, enables the

ICING-ROOM.

baking to be absolutely controlled. More interesting, however, are the "cake-machines" and the "combination machines" for producing fancy cakes in many forms: by pressing the soft batter through annular openings, to form an endless band with a core of fruit or figs; through round openings, to be cut off by a reciprocating wire at regular intervals, or through a series of small holes arranged around a common center, beneath which the pan with a rocking motion approaches and recedes, receiving at each movement a ring of coalescing drops to form a "jumble." From the cake-machine the cold pans with their burden are transferred to the ovens, and after a short circuit through the heated air, the pans are removed and loaded upon the metal flanges of a pair of vertical elevator belts, which raise them to the packing-room above, across which the pans are transferred upon an endless belt: and in their transit relieved of their appetizing load by the nimble fingers of a row of white-aproned girls.

In an adjoining "icing-room" the plain baked foundations are being transformed by the application of icing, marmalades, jellies, etc., into an endless variety, reminding one of Bedredded in the Arabian Nights as he took the cream tart out of the oven and strewed it with pomegranate kernels and sugar

Possibly no room in the entire works more adequately shows the advance of the present time in the use of machinery than the bake-room. In the olden times the only difference between the baker's oven and that used at home was one of size. Then there were no labor-saving implements: from the time the flour left the barrel till it lay in loaves on the consumers' tables, its changes and development were solely the result of personal labor. Indeed, there linger in many memories legends of the use not only of hands, but of feet also, in the preparation of bread, in a manner no way calculated to improve the appetite. Open

PACKING-ROOM.

windows have enabled observers to see workmen, with white paper skull-caps, perspiring over their tasks and in attitudes whereby drippings from overhanging faces could not avoid adding to the moisture in the kneading mass. From such offenses machinery effectually removes all danger. There was a time when certain people, with not overstrong stomachs, had no use whatever for bakers' products, but no occasion exists to-day for qualms of any kind. Each and every step in these works is a model of cleanliness. The principles of division of labor here have most thorough application. Each man and woman does his and her part, thereby advancing the result a certain distance. Perfect knowledge of every machine employed permits of most efficient work.

With the utmost deference to the cakes made by mother and grandmother, and he would be ripe for treason who would disparage them, Cartwright & Borden are helping solve many of the social problems of the day through their products; thousands of people are eating better food than they otherwise would or could. The time is not so very far away when the only crackers used were the square "soda" and the small, round "oyster." To-day the varieties are legion, and no compound of wheaten products more toothsome and wholesome was ever sent out for public inspection and use.

To-day many interests are involved in the making of salable goods that in "ye goode olde times" were not dreamed of,—for instance, the employment of bright colors, attractive pictures and suggestive labels is a feature of twentieth century industry. The girls working in the labeling-room are doing what, in their mothers' younger days, was not deemed necessary. To-day the article must not only taste good, but it must appeal to all the senses, and above all must look well, hence the introduction of the printer's labor in its most attractive form.

LABELING-ROOM.

SHIPPING-ROOM.

In the packing-room, one is impressed with the ingenuity and taste displayed in the packing of goods in barrels, wooden and cardboard boxes, all bearing the imprint of the Cartwright-Borden Company with attractive labels, for the eye of the consumer must be lured as well as his appetite, and the manufacturer must supplement the wily arts of the retail dealer. In the accompanying illustrations little idea can be given of the light and airy roominess and cleanliness of every department, but every citizen and every citizen's wife with "their cousins and their aunts" are invited to investigate for themselves and become acquainted with one of Worcester's new and growing industries.

PRO BONO PUBLICO.

The Worcester Gazette gives indications of deserved prosperity in the changes now progressing at the corner of Mechanic and Norwich Streets. The block long occupied by the late George S. Hoppin, produce dealer, is undergoing a complete transformation. When completed, the place will be airy, well lighted and handsome, a fit home for the enterprising journal, and marking, it is to be hoped, a new era for the street.

Continued prosperity has compelled the Worcester Umbrella Company to still further extend the space occupied in the Lowell Block, corner of Norwich and Foster Streets. The addition of 50 per cent. of room gives them three-fourths of an entire floor. The condition is most satisfactory for a practically new industry.

The National Magazine will devote a considerable portion of its August space to a description of Worcester, this in keeping with its plan to write up several flourishing places under the title of "Flourishing American Cities."

What People Might Think.

Sunlight, glancing in between
Chestnut leaves of olive green;
Meadows, quiet and serene,—
These bring in the Summer.

Goodale.

JULY inspires less of real sentiment than any other month in the annual round. To be sure, Young America looks forward to it with longings unutterable, but with his aspirations very few of his elders sympathize. At the same time there is not one of the adult generation who would like to have the coming citizens lacking in the spirit which is supposed to have taken its rise in certain July events of long ago. Some insist that other means than those tolerated on the Fourth should be taken to properly instill patriotic sentiments in youthful hearts. However, until the prescription has been made and administered, we shall continue to have the din incident to the day. Those who so thoroughly dislike the confusion must themselves take a trip to some more quiet place, if one can be found, and, meantime, the children will have their fill of noise.

WORCESTER contains places and objects suggestive of the Revolutionary days, and why would it not be a good idea for antiquarians and historical societies to endeavor to make their stories interesting and profitable to the easily impressed pupils of the public schools and their older brothers and sisters who passed out into active life? The talk on the Old Common Memorial Day, one year ago, was quite in place, calling attention to the dead who lie beneath the trees of that public place. The Rev. Mr. Phalen eloquently expressed the feelings of those who are knowing to the fact that the space was once devoted to burial purposes, but our city has now nearly or quite as many who do not know this important truth. A good hour could be spent in indicating the probable place of the assembling of the Minute Men on the 19th of April, 1775. No month of July should be allowed to pass without reference to Isaiah Thomas and his reading of the Declaration.

THIS year the Old South Church purposes to take advantage of an interesting fact pertaining to a bit of metal in her possession and to make the most of it. When the ancient edifice which for so many years graced the Common was disposed of, a reservation, among other items, was the bell which had for nearly a hundred years called the people to worship. This bell now hangs in the prepared receptacle of the new structure. It does not swing, but the tongue is made to strike against the sides, and the music is as sweet as when first heard by the ancestors of these twentieth century listeners. Having been cast by Paul Revere of Old North Church and Lexington fame, and having been first suspended one hundred years ago, there will be peculiar significance in the exercises which the young people of the Old South contemplate on the Fourth. From 6.30 to 7 a.m. it will be rung, patriotic selections will be sung on the Main Street steps, after which there will be an adjournment to the vestry for words of a patriotic nature by Worcester citizens. Why would not the annual observance of such an exercise be a good feature in all future observances of the national day?

AS the MAGAZINE lingers in the printer's hands, the city is celebrating its regular rounds of graduation. Public and private schools have rounded out the year with the beautiful sight of hundreds of young people, each one the pride of some household, receiving from the proper source the evidence of work done. With ever-increasing numbers it would seem that the future generations would not be lacking in what the schools can do. The true test is yet to come. In the midst

of the announcements of the planting of new industries in Worcester, people, especially those having children, are greatly interested in the proposed extension of Clark University. The prospectus, already in the hands of future patrons, is stirring ambitions otherwise entirely impossible of realization. Beginning next October, the college opens, and another institution of academic nature will be added to the extended list in Massachusetts. That it will be well patronized, there is not the least doubt. A city of Worcester's size and characteristics will supply students, nor will the annual numbers sent to other and more remote institutions be sensibly less. So far as books and schools are concerned the city is well provided, and so far as their functions are concerned, there is little to be desired.

WORCESTER BOARD OF TRADE

BANK BUILDING, 11 FOSTER STREET.

OPEN 7.30 A.M. TO 6 P.M. PRESIDENT'S HOURS: FROM 10 TO 11 A.M. TUESDAYS, THURSDAYS AND SATURDAYS.

PRESIDENT, WALTER H. BLODGET. VICE-PRESIDENT, HENRY F. HARRIS.
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Foreign Trade, EDWIN P. CURTIS.
Publication, RUFUS B, FOWLER.

Board of Trade Notes.

The Export Sheet, which is issued under the direction of the Committee on Foreign Trade, is gaining very favorable results. The replies already received from foreign houses asking for catalogues will, no doubt, lead to money orders being sent to Worcester manufacturers.

The Legislative Committee has held several meetings, and among other matters took much decided grounds against the bill introduced by Representative Hagberg of this city requiring all manufacturers to pay their help in cash, an act aimed at the American Steel & Wire Company, which for some time has paid in checks. An interesting sequel to such action is the fact that the bill, though it had passed both branches of the Legislature, was killed on the enacting stage in the Senate, enough senators being convinced of the futility of their former action.

The annual reports for the year 1901 are now published, and with the revised by-laws and the membership list are being mailed to all mem-

bers, the reports only to exchanges. The reports are very complete and will be of interest to every member.

The Mercantile Affairs Committee has under consideration a project which we think will bring to Worcester a large number of people, though the plans are not sufficiently developed to admit of details now.

The Committee on Transportation and Railroads has in hand several matters which are being considered by the railroads, and all of them will be of service to the city.

The President is very anxious that the Advisory Committee be heard from in the way of suggestions and any matter which may be properly brought before the Board.

In response to the invitations sent out soon after the annual banquet, no less than thirty-three names have been added to the list of members, nor is it expected that the end is yet, for doubtless many have overlooked the matter and will be heard from later.

It should be understood that the appointments and conveniences of the Board of Trade rooms are at the command of all visiting members of similar organizations elsewhere. All such will be heartily welcomed to the best that the rooms afford.

The communication from the produce dealers, requesting concerted action in endeavoring to secure quicker delivery of perishable articles, has been referred to the Committee on Railroads and Transportation, from which desired results are expected.

During the months of July and August the rooms will be closed Saturdays at 1 o'clock p.m.

NATIONAL BANKS.

CITIZENS' NATIONAL BANK, 342 Main Street. Incorporated as a State Bank in 1836; as a National Bank in 1865. Capital $150,000; surplus $84,000. Dividends April 1 and October 1: rate past year, 6 per cent. President, Henry S. Pratt; Cashier, George A. Smith; Directors, Henry S. Pratt, George B. Buckingham, Samuel E. Winslow, John C. MacInnes, William H. Crawford, Burton H. Wright, Herbert Parker.

FIRST NATIONAL BANK, 474 Main Street. Incorporated in 1863. Capital $300,000; surplus and undivided profits $200,000. Dividends May 1 and November 1; rate past year, 10 per cent. President, Albert H. Waite; Cashier, Gilbert K. Rand; Directors, Arthur P. Rugg, Ransom C. Taylor, William H. Sawyer, Albert H. Waite, Orlando W. Norcross, William H. Inman, J. Russel Marble, Frederick E. Reed, Charles H. Morgan.

MECHANICS' NATIONAL BANK, 311 Main Street. Incorporated in 1865. Capital $200,000; surplus and undivided profits $48,000. Dividends April 1 and October 1; rate past year, 4 per cent. President, Francis H. Dewey; Cashier, Albert H. Stone; Assistant Cashier, M. H. Lowe; Directors, Francis H. Dewey, Stephen Sawyer, Charles A. Hill, Thomas B. Eaton, Stephen Holman, G. M. Bassett, W. M. Spaulding, B. W. Childs, Milton P. Higgins.

WORCESTER NATIONAL BANK, 9 Foster Street. Incorporated as a State Bank in 1804; as a National Bank in 1864. Capital $250,000; surplus and undivided profits $240,000. Dividends April and October; rate past year, 8 per cent. President, Stephen Salisbury; Cashier, James P. Hamilton; Directors, Stephen Salisbury, A. George Bullock, Charles A. Chase, Lincoln N. Kinnicutt, Josiah H. Clarke, James P. Hamilton, Edward L. Davis.

SAFE DEPOSIT AND TRUST COMPANY.

WORCESTER SAFE DEPOSIT AND TRUST COMPANY, 448 Main Street. Incorporated in 1868. Capital $200,000; surplus $100,000. Dividends January, April, July and October; rate past year, 6 per cent. President, Edward F. Bisco; Secretary and Treasurer, Samuel H. Clary; Directors, John H. Coes, Edwin T. Marble, Edward F. Bisco, Henry F. Harris, Charles S. Barton, Charles A. Williams.

SAVINGS BANKS.

PEOPLE'S SAVINGS BANK, 452 Main Street. Incorporated in 1864. Deposits $8,985,436; guaranty fund $400,000. Interest payable February and August 15. Deposits go on interest February, May, August and November 1; rate past year, 4 per cent. President, Samuel R. Heywood; Treasurer, Charles M. Bent; Investment Committee, Samuel R. Heywood, Edwin T. Marble, Alexander DeWitt, Wm. W. Johnson, Henry F. Harris.

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THE WORCESTER MAGAZINE

AUGUST

1902

DEVOTED TO

Good Citizenship and Municipal Development

PUBLISHED MONTHLY BY THE BOARD OF TRADE

WORCESTER, MASSACHUSETTS,

U. S. A.

For Information as to

WORCESTER AS A CITY,
WORCESTER AS A MANUFACTURING CENTRE,
WORCESTER AS A MERCANTILE CENTRE,
WORCESTER AS A PLACE OF RESIDENCE,

Write to the Secretary of the

Worcester Board of Trade,

Worcester, Mass.

JUDGE JOHN HOPKINS.

The Worcester Magazine.

VOL. IV. AUGUST, 1902. NO. 2.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

John Hopkins, Late Associate Justice of the Superior Court.

BY FRANCIS A. GASKILL.

THE city of Worcester, the County and its Bar have lost in less than three years three of their most eminent lawyers. The beloved and brilliant Colonel Hopkins, the learned and philosophical Goulding, and the loved and heroic Judge Hopkins have within that time ceased from earthly activity.

Judge Hopkins, though he lived in Millbury, was so identified with Worcester, having for many years an office here, that we almost claimed him as our own. We were pleased to honor him in his lifetime, and we have him in affectionate memory.

John Hopkins was born in Leonard Stanley, Gloucestershire, England, March 19, 1840. He came to this country when very young, and at about fifteen years of age he left his father's home and began his earnest life struggle. Only last fall, on a returning steamer from England, he told me in brief the story of his early years. The plain, calm recital of it had not in the mere words a picturesqueness, but in the deep meaning of it there was to me an impressive and thrilling power. The loss of mother on the voyage to America, the life in New York State of humble labor, the abandonment of home with the purpose at once to relieve the father and to burden himself, the ever strong will to bring out all the latent power of his being, not consciously expressed, but quietly conceived, the determined and laborious effort with mind and hand, and the gradual steps toward the ultimate accomplishment of his desire, combined to make it a story of moral grandeur.

My first remembrance of Judge Hopkins goes back to the time in my native town of Blackstone when he was one of the big boys in school there and I one of the small ones. The same earnest persistency, the same gravity, modified only by the buoyancy of youth, which in later

years you saw and appreciated, seemed then apparent to me.

The admiration and chivalric devotion with which the youngest is often inspired for the maturer boy affected me. His ideal, his purpose to advance along higher planes, to "lengthen his cords and strengthen his tents," seemed heroic, and were a growing inspiration. He was the first boy whom I knew who had the charm and the halo of a college man about him, and I think that for me that primal charm always remained.

He entered Dartmouth College, taking the scientific course, and graduated in 1862. After studying law in the office of Mr. Cook of Blackstone, he was admitted to the Worcester County Bar March 16, 1864. He began practice in Millbury, but it soon widened and gradually embraced the county. While it was true that his services were sought in a large number of criminal cases, and he attained much distinction thereby, I always thought his highest achievements were on the civil side of the court. I remember listening to a portion of the trial of Goodale vs. the Worcester Agricultural Society, in which he was counsel for the plaintiff, and I have rarely seen a higher exhibition of skill against great odds than he manifested in that trial.

The estimate of his qualities as a lawyer was admirably set forth in the "Memorial of the Bar," prepared by Hon. Thomas G. Kent, from which I quote: "Brother Hopkins was eminently a successful jury lawyer. In criminal causes, where his legal services were for a long period more eagerly and constantly sought and rendered than those of any other practitioner at our bar, he repeatedly won victory after victory that seemed at least doubtful if not impossible.

"His vigilance never failed him. His careful preparation was full and comprehensive, his patience was untiring, his capacity was equal to the best. Woe be unto the opposing counsel, whether he were the prosecuting attorney in an indictment or a lawyer on the other side in a civil cause, at every stage of the case pending, until the verdict was rendered, if he were less sleepless and vigilant than Brother Hopkins. More likely than not he would at the last, when victory seemed to him little less than certain, see it vanish, and have to content himself with a doubtful bill of exceptions.

"His great reliance was upon the jury. They were plain people. He never soared above their heads. His address never failed to be understood. It was the reasoning of a plain man to plain men.

"In all his strenuous practice at the bar there was not 'a blot on his escutcheon.' He tried his causes thoroughly; he despised indirectness and chicanery no less than downright dishonesty."

My own knowledge of him at the bar continued from the time I came to Worcester in 1868 till he was appointed to the bench. His characteristics at the bar sounded in deep conviction, sound and earnest principles, tenacious and abiding determination rather than in glowing enthusiasm or flashing brilliancy. His early struggles in the tempering of the metal prepared it to stand any strain. He was conscious of his tensile strength and confident in it.

Compelled in youth to rely upon himself, he never forgot the strength of a self-reliant manhood. He never had a senior counsel in boyhood, and for him, therefore, there was no need of it at the bar. I cannot recollect a case where I ever saw him associated with a senior. There was no vapory film about his arguments, but the strong, deep current of a remorseless and unerring logic. It was a delightful intellectual exercise to

follow him as he laid his broad foundation and built block by block his stately and rugged structure.

I have rarely known a lawyer who seemed to be more securely persuaded of the strength and justice of his cause than John Hopkins.

There seemed to be no wavering, no doubt, no fear that doubt ever could come. This abiding confidence soon deepened into abiding conviction, and the battles of the elements, the gales of man, the thunders and lightnings of opponent or court never alarmed or frightened. He rode the storm, and his cases never went riderless into battle or into defeat.

I remember at one of our bar dinners our late brother, W. W. Rice, in introducing or referring to Mr. Hopkins, said he never knew how long he could keep a judgment, if he ever succeeded in getting one, with John Hopkins on the other side, for his persistent ingenuity was such that even human judgments had no terror for him. It was this twin-like loyalty to his clients, his accurate knowledge, his high character, his unswerving adherence to principle, his unstinted spending of himself, and his great ability, that brought him to a high place at our bar, and made us united in joy when he was appointed to the bench.

Before his accession to the bench, Mr. Hopkins took from time to time an active part in politics. He was a member of the Legislature, nominee of his party for high offices, and engaged in many political campaigns. I think the highest achievement of his in this line was his argument in the joint debate with Mr. Walker in Mechanics Hall. He had an antagonist of great ability, perfectly familiar with his subject, an expert who had given the subject to be discussed years of study. John Hopkins knew all this; he also knew that he himself had no such preparation, but he believed in the positions he was to maintain; he knew that his party relied in full assurance upon him, and I believe he astonished even his friends by his masterly argument. Nothing could swerve him from his line of thought; there were a directness and fearlessness of attack, an astuteness of defense, and withal an impression enforced of the broadness and range of mind, that were almost a revelation.

But I imagine that the happiest public service he rendered was to his own loved and loyal Millbury. He could not fail to appreciate the unstinted confidence which his fellow townsmen had in him, and it was a joy to serve them and give them of his best in the various positions to which they called him. They remained true to him to the end, and I know of no more beautiful and touching tribute than that they paid to his memory in the suspension of all business during the solemn hours of his funeral.

He was loyal to his College, and showed it in many ways, and by the surest test of all, by sending both of his sons there. His Alma Mater appreciated not only his loyalty, but his wise and safe judgment, his prudent and sagacious counsel, and availed herself of it by appointing him one of the Visitors on the Chandler Foundation, and relying upon his suggestion and experience.

He had the saving grace of humor, the kindly warmth of the grasp of the hand, the fraternal greeting of the true-hearted. He rarely drew the veil from his heart, but it was not necessary, for his whole earnest walk and conversation, his composed and serene carriage, his high ideal of duty, his detestation of meanness and chicanery, his character rooted and grounded in the faith, gave you the vision of the true heart.

His most admirable and enduring service was his work as a judge, which began with his appointment to the Superior Court April 1st, 1891, and continued a little more than eleven years. He was greatly respected by the Bar of the Commonwealth, and largely won their admiration and affection. His quality of service was almost ideal, with its strength, dignity and serenity. His great ability was early recognized. The leader of the Bar of one of the large counties has told me of the impression which Judge Hopkins made upon him soon after his appointment. A case of great perplexity and nicety of distinction had progressed to the close of the evidence when a motion was made for a verdict to be ordered for the defendant. It was argued, and Judge Hopkins at once gave an oral opinion occupying about fifteen minutes, and with that consummate logical power of his separated the essentials from the unimportant, clarified the whole situation, gave his reasons and announced his decision. The whole line of argument was so conclusive that it constituted, for the party in whose favor it was, his brief for argument before the Supreme Court, and was sustained by it.

Judge Hopkins was an impressive illustration of the success which results from absolute surrender to the imperative demand of duty. Loyalty to client was supplanted by loyalty to justice.

Occasionally one hears it said that a lawyer is too strong a partisan to make an ideal judge. I am by no means certain that it may not be a recommendation, that the same earnestness of conviction which impelled to strenuous effort at the bar may easily and forcefully control judgment and action upon the bench. It may be the judicial temperament in abeyance. Certainly if John Hopkins at the bar was a partisan, Judge Hopkins on the bench was the serene arbiter.

Quiet, courteous, undisturbed, under absolute control, patient, laborious, exact in knowledge, forceful in reasoning, reliant, dignified, impressive from the strength of Christian character and dominated by the eternal principles of right and justice, such was our loved brother. The same training which made him self-reliant at the bar made him such on the bench. He preferred to reason out a situation and satisfy his judgment and conscience rather than seek the judgments of another.

But he always desired the aid the bar might give him. Do not, therefore, misapprehend me when I say he was self-reliant. He was *not* self-opinionated. He had a happy and secure grasp of the essentials requisite to a safe judgment. First impressions were carefully and almost laboriously tested before they ripened into final approval or reversal. With almost military precision the column of facts of a given case was formed and the stately procession moved in consummate order. There was no confusion in the ranks. To use a different figure, he had an unusual facility of "marshaling the assets" of a case.

An illustration of his patient and exact method was found in his note-book which he used here in his last session. All essential statements of witnesses were recorded, interesting or helpful authorities were noted, the material questions, a general outline of the charge, the general principles, the modifications or exceptions applicable, all arranged in systematic and logical order, appeared. It revealed the judge. In health or in illness no labor which he thought essential to the highest discharge of duty was omitted.

Those who saw him from day to day as he sat in the court-room in Worcester

during the last weeks of his judicial service, struggling with disease, combating pain, conscious of increasing physical weakness, yet serenely persisting in the performance of duty, need no reminder of the crowning heroism of his life.

The tributes of his fellow members of the Worcester Bar, when lately their resolutions were presented to the court, left no doubt of the place Judge Hopkins occupied in their judgment and affection. He loved the Worcester Bar, and they loved and admired him, and in their affectionate judgment his associates upon the Bench, and the Bar of the Commonwealth concur.

Address at the Board of Trade Banquet,

MAY 2, 1902.

BY JAMES LOGAN.

WE are living in an age of fierce competition, the hardest which the business world has ever known, and the pace is to be faster rather than slower in the years to come.

It is an interesting study to note the causes which one after the other have in logical sequence brought us to the present fierce competitive conditions.

This awful competition, and it is awful, has specialized every branch of industry. Labor is subdivided; it has to be. Each operative in some lines of industry does a small part of the completed whole, but each part must be well done, and the cost must be reduced to the minimum.

In the thought of many this is a great misfortune, but it does not follow that this is an entirely correct view of the case. Might I suggest that there is another side to the picture.

We hear men bewail the fact that by this subdivision of labor, man has simply become a human machine; and they sigh for the return of those good old days of the apprentice system which made an all-round workman who could do anything.

No doubt the apprentice system did make some all-round workmen, but the thing which strikes our attention and of which we make a mental note in everything is the exceptional. If we meet on the street an intoxicated man, we make a mental note of the fact; but we do not take note of the ninety-nine men who are sober; and the fact that the all-round workman was so noted, only goes to prove that he was not the common, but the uncommon, product of the apprentice system. And it is well inside the truth to say that the scale to which the ordinary mechanic of to-day is forced to work would completely paralyze the former all-round workman.

In a recent conversation with a professional man, who, in speaking of the subdivision of labor, deplored the fact that the modern factory system was making men and women simply parts of a machine, asked the question:

"What are we to do for that great army of men and women who are doomed to sit before a machine and feed it all day long?" And my reply was: "In my boyhood I used to feed a machine all day long, from five o'clock in the morning till seven at night, and I loved my machine and we had happy times together. Up to that time it was the highest grade of work I had ever done, and it was a step up for me to feed a machine." There are thousands of men and women running machines in our factories who enjoy the companionship of, and who have a feeling akin to love for, the machines which they operate.

We can conceive of lines of industry where this might not apply with equal

force; but who ever knew an engineer who did not love his engine? And the same truth holds good with thousands of other machines.

This appeared to my friend as a revelation, and I suggested further: that the inventive and constructive ability which made possible the machine was never educated *down* to operate it; but having invented and constructed the machine, then other men and women were educated *up* to operate it; and it was a distinct advance, a step up for such a one to become, as my professional friend expressed it, "a part of the machine."

Every step of progress that has ever been made has been made by individuals who have climbed above the mass, and who, by climbing themselves, have developed power to stand; then with a footing that was secure, they have reached down and helped others up.

The educated brain and hand having climbed above the level, and from that higher level having seen as in a vision a higher development of the race (or in industry the perfected machine), even before pencil had been put upon paper, by faith grasped the "substance of things hoped for" and the machine became a reality. Then reaching down below the level of the machine, a thousand or a hundred thousand have been lifted to a higher level; and their lighter labor, not unmixed with joy, has taken the place of *laborious toil*; and the product of their work by its lower cost of production is brought within the reach of a million souls, and the comforts of life have been multiplied and increased, and civilization has taken a step up to a higher plane.

Capital and labor are being concentrated in the hands of men who are to be given great power. The highest wisdom and the best thought will be needed to rightly direct and control these two mighty servants of mankind, neither one of which must be master, but both brethren.

Capital can do nothing without labor, and labor is powerless without capital; and both need brains to direct them. The men who will in the coming years control these two mighty forces need to be large men; and in that lies our only hope for the future, for large men can come to agreement where smaller men would drift apart.

The great consolidations of railroad, industrial and commercial enterprises, with their enormous aggregations of capital, have brought with them great burdens of care and responsibility, and those on whom the burden of direction has been laid, struggle under a heavy load, and some of them will go into their graves years before their time in an attempt to make headway against conditions which they can no more control than they can control the ebb and flow of the tides; but out of the struggle leadership will be evolved.

Economic changes have come, and with them have come new conditions.

In our great business enterprises, the managers or proprietors no longer know intimately the individual workman. It was not their wish that the new condition should produce this result, but it was inevitable.

When business was smaller, the manager or proprietor knew personally and intimately every person who worked in his factory. He knew and entered into their joys and sorrows, and they into his. He knew when little ones came to brighten and bless the home; and he knew also when the humble home was visited by the dark angel of Death. But as business has grown larger, he cannot have that close and personal touch which he once had, and half the joy of doing business is gone.

The workman may feel that the gulf between him and his employer is growing wider, and the manager and employer, if he has a heart in him, feels it more yet. He bears a burden of care and responsibility which the average employee cannot begin to appreciate. He is often compelled to "tread the wine-press alone" while he yearns for that brotherly sympathy and companionship which he once enjoyed, but which it seems has gone forever.

Some men deplore the intense commercialism of our day which has produced these conditions, and speak as though it were unworthy and wrong for a man to give to his work his best. But they do not apply the same logic to

men engaged in callings other than business.

The business and professional man owes it to the world to give to his work his best, and anything less than that is unworthy.

If God has given a man five talents, He expects him to use five talents, not two; and the parable teaches that if he does not use them they will be taken from him.

In our judgment of men, we need to be careful not to give all men credit for being possessed of the passion for piling up dollars; that is not the motive which inspires many men who are misjudged. The accumulation of wealth with many men is simply an incident of their work.

They must plan and work; that is the habit of their lives; and by so planning and working they are rendering large service to their day and generation; they are always mortgaging the future, and at the end of life they will perhaps say (with the great empire builder, Cecil Rhodes), "So little done—so much to do."

In these strenuous days a man should not make the mistake of making business the whole end and aim of life. The business man should not measure everything by the standard of the dollar. He ought to try to cultivate a correct sense of value, which some one has aptly called the "sixth sense." He ought not to neglect the other things which are essential for his largest development. He is a debtor to society, and he owes something to that. He should spare time for the cultivation of those higher, nobler and more enduring possessions which make the full-sized man. He ought to remember that "life consisteth not in the abundance of things which a man possesseth," and that a man's true value to society consists not in what he has, but in what he is.

He ought to remember that the man who reaches the end of life with only money is *poor* indeed; and he ought also to remember that unto him to whom much is given, of him much will be required. Too often in our thought we limit that quotation to mean money, but in this twentieth century on which we have entered, I am persuaded it will be given its larger and truer meaning, that of SERVICE.

Wisdom vs. Foolishness.

While the wheels in the shredded-wheat factory have ceased to revolve, Worcester generally rejoices to know that such cessation does not take from its midst the energetic man whose genius devised and developed the vast enterprise. He is still at the Oread, though the life-prolonging product of his invention now finds its way to market from the new factory in Niagara Falls. But it was not the removal that this article was started to discuss; rather was it to commend a book which Mr. H. D. Perky has just produced. The author is nothing unless enthusiastic, and through all his labors to induce people to eat nourishing food he has had at heart not so much a commercial return for his work as physical betterment of mankind. He has lectured and demonstrated, both personally and through his employees and the graduates from his school, all over this country and in foreign lands, always anxious to make mankind stronger, healthier, and thereby physically and morally better. To still further advance his theories, and, if possible, to make them all the more popular, he has issued a beautiful volume of 100 pages entitled, "Wisdom vs. Foolishness." The book has illustrations, representing places and faces which are significant in his treatise, not least of which is an excellent half-tone of his own well-known features, which serve as a frontispiece. The introduction, not always a valuable portion of a publication, in this case must be read if one would know the reason and the scope of the work. The three lectures given are "Nutrition as a Tooth-builder," "Oral Sepsis," "Pastor and Teacher." There is not a page in the volume which does not merit the most careful attention of every reader. How to get strong has long been a theme with old and young. With Mr. Perky the thought is a life-work. It is not too much to say that if every citizen would read and practice the teachings in this book he would live longer and more happily than he will otherwise. It is work in the right direction.

Elbridge Smith, Schoolmaster.

WHEN in 1892 Worcester's new English High School was dedicated, one of the most interesting figures present was that of Elbridge Smith, who forty-seven years before had had to do with a similar exercise when the Classical and English High School edifice, then standing on the corner of Walnut and Maple Streets, was formally opened. The structure, in time removed to the north side of Walnut Street, is still standing, a marked contrast to the Richardson building opposite, and to the English High School building on Chatham Street. After a long life devoted to the instruction of youthful America, Mr. Smith entered upon the higher life June 20, 1902.

The future teacher was born in East Sudbury, now Wayland, Mass., Feb. 14, 1818. With his keen sense of the amusing and interesting, we may readily conclude that many a time, he proclaimed himself St. Valentine's gift to juvenile humanity. From the schools of his native town, Mr. Smith entered Dartmouth College, but remained there only one year, passing thence to Brown University, whence he was graduated in 1841, a member of the Psi Upsilon Fraternity and of the Phi Beta Kappa. Among his classmates were Samuel Greene Arnold, the historian, and Henry Simmons Frieze, the distinguished Latinist of Michigan University. Recognizing his merit and scholarship, his Alma Mater retained him for two years as a tutor. The next two, or till 1845, he taught in the Providence High School. It was from Providence that he came to this, then, town of Worcester, to succeed the late Charles Thurber as principal of the Latin School, then conducted on the corner of Thomas and Summer Streets.

Thomas Chase, subsequently President of Haverford College, Pennsylvania, in the month of August of the year, 1845, thus wrote upon the blackboard, in the old building, "Latin Grammar School.—First Master, John Adams; last, Elbridge Smith." That very day, Aug. 5, the pupils of the Latin School and those of the Girls' High School joined forces to occupy the new structure, just finished, and then thought to be the very finest in the Commonwealth, an estimate difficult to realize as we look at the rather hard lines of the sidetracked edifice now devoted to drawing and manual training. Upon the wonders of that new school-house as it was then regarded, Mr. Smith could discourse entertainingly for hours. His mental pictures of the prominent men of those days were so vivid that he fairly aroused kindred impressions in the minds of those to whom he spoke. His listeners were again in the presence of the Lincolns, Davises, Greens, Hills, Tolmans, and the many other excellent people who, in the forties, made up the prominent citizens of what the teacher never ceased to characterize as the most delightful village in Massachusetts, and always averring that it lost its happiest features when it threw aside the easy-going habits of a town to assume the straighter ones of a city.

However many places have been held since, our schoolmaster never failed to regard the three years spent in Worcester as among the happiest of his long career, and, apparently, whatever good opinion he held of the town and its people was fully reciprocated by those to whom he ministered. Diligent inquiry among the men and women of today who were his "boys and girls" fails to develop anything except the most pleasant recollections of their former master. He laid the foundations of the Classical High School's library, began the equipment of the physical laboratory, and in every way touched the progressive life of the school.

In 1848, just as Worcester was getting into shape for a city's name and government, the principal of the High School accepted an offer to go to Cambridge, where, under the shadow of Harvard, he performed a like service for that college city and organized her first High School,

remaining to instruct and further the youth of that place till 1857. He was a fortunate person who could find Mr. Smith so much at leisure as to be able to open his book of Cambridge memories. They differed from those of Worcester, not at all in interest, but his longer stay there gave him a wider range, and the noted people of that famous resort added to the list of notables whom, on occasion, he could call up. President Edward Everett of Harvard sent his son William to Mr. Smith's school, and in many ways he was thrown into the society of the distinguished orator and statesman. James Russell Lowell, Dr. Holmes, Longfellow, indeed the large array of men and women who in those days gave fame to the city on the Charles, were in some way interested in the school and the master, and he did a great work there. Mementoes of his stay may still be seen in the magnificent library of the Latin School and in the apparatus, much of which is still in use.

After his nine years' experience in Cambridge, in 1857 he forsook Massachusetts and located in Norwich, Conn., where he had the honor and pleasure to organize the noted Free Academy of that city. There he remained and worked, as only such a man could work, nine years more, thus coming to 1866, when he came back to his native state, and in Dorchester assumed the direction of the high school in that ancient and worthy place. Here he taught till the infirmities of age reminded him that he must rest, so after twenty-four years of continuous service in Dorchester, or in 1890, he laid down the duties of teaching and for the following years was a quiet citizen of his last accepted city. Just one year more would have made for him a continuous record

ELBRIDGE SMITH,
In His Worcester Days.

of fifty years in the school-room, but after ceasing to teach directly, he did enough of indirect work in this line to more than round out his good half century. When the final days of his stay in the Dorchester school came, his former pupils of that place, many of them grown to be distinguished citizens, holding high places of honor and emolument, gathered to express to their old teacher their thorough appreciation of his labors in their behalf and their undying affection for him as a man and as a citizen. As a slight token of their regard, they presented to him a magnificent specimen of clock-making, asking him to let it stand in the hallway of his home, that its "forever, never," might ceaselessly tell of their love and respect. This was twelve years ago, and though the later years have been those of age and feebleness of body, they have not been without their pleasures. Always of an antiquarian turn of mind, he has given much time to the unearthing of interesting data concerning Dorchester, and well armed was he who could successfully cope with him on any subject pertaining to the early days of the city.

Intensely loyal to the place where his home might be located, he entered ardently into all that concerned its welfare. When Dorchester claimed that within her borders were held the first town-meeting in America, and also the first free school, she sent her old schoolmaster to the State House to plead her cause, and right well did he accomplish his mission. He made each and every point that he essayed, and carried off the victory of an appropriation for a monument. Those who listened to his masterly presentation of his subject obtained, gratis, a lesson in history that they will not soon forget.

But over and above every other consideration, he was first, last and always a schoolmaster. The disposition to instruct was ever prominent. No one could be in his presence five minutes, whether in school or out of it, without gaining some piece of information which he would like to remember. His range, apparently, was limitless. Science, history, the classics, everything that enters into the scheme of human knowledge, had in him an ardent lover and a successful expositor. Those who saw him rise once in a teachers' assembly in the Boston Latin School where some subject in physics had been discussed, and the "Resolution of Forces" was the topic immediately in hand, to this day recall with delight how clearly he illustrated his point by saying, "I have sometimes told my young folks that an excellent illustration of the resolution of forces is found in the raising of an umbrella," and, suiting the action to the word, he applied his hand to the shade he had with him and in a twinkling had resolved all the power applied to each and every rib that his shade possessed. So much of a teacher was he that he found little time for purely literary work, for which his great acquirements specially fitted him. Whatever in this line he did accomplish was particularly well done. He prepared several papers on subjects pertinent to his profession, and also several memorial addresses in behalf of men whom he had known long and well. He was selected to give the dedicatory address at the opening of the Wayland Town Hall, and at the dedication of new school-houses in Norwich, Cambridge and Worcester. In the conferring of honorary degrees, Brown University never did a worthier act than when, in 1893, she wrote the name of her schoolmaster son as a Doctor of Science.

When the High School Association was formed in this city, Mr. Smith was invited to meet his former pupils, and they came together in large numbers to take the hand of the man who had done so much for them. His remarks, when the time came for him to speak, were of the most felicitous character, and those who listened were sorry only when he ended. To the request that the school might have some semblance of himself, he responded with the oil painting, now hanging in the office of the principal, the same having been copied for use in this article. It is a fine reproduction of the face of the teacher as he was before age had come upon him. He looks the schoolmaster, which everyone knows he was, down to the slippers which he ever thought the

proper kind of foot-covering in the school-room. It is related of his Cambridge life that he once forgot to change back into his out-of-doors wear, and so trudged away to his home, two miles off, wearing only his school-room gear.

At the time that a new high school edifice was demanded for this city, he wrote stating his pleasure at the need of increased facilities, and expressing his hope that, whatever course should be pursued, there would be no division along the line of sex, claiming that the school was best where both boys and girls studied and recited together. Again, when the new English school building was completed, no more inspiring words were uttered at its dedication than those which came from Elbridge Smith. Before the audience stood long years of service, successful labor in a noble calling, and he spoke as one having authority.

June 23 came the last earthly scene in the story of Elbridge Smith, for then there gathered a large number of his old friends in his late Dorchester home, No. 1595 Dorchester Avenue, to pay their parting tribute, and to take a final look at the face they had loved so well. His former pastor, Albert G. Upham, D. D., conducted the services, though the closing prayer was made by the Rev. Leo Boone Thomas, recently of Worcester, now pastor of the Stoughton Street Baptist Church, where Mr. Smith had long worshipped. Favorite hymns of the departed teacher were sung, and then his body was taken to the town of Weston for burial.

ELBRIDGE SMITH
In Middle Life. From an Oil Painting.

Surely a well-rounded life was this. There have been teachers many, nor will there be less in coming years, but for singleness of purpose, for absolute, unqualified devotion, we must seek a long time before we find the equal of Elbridge Smith, schoolmaster.

The Armenians of Worcester.

By Eldridge Mix.

THE Armenian nation is one of the oldest in the world. Its people are said to be of the Aryan race, and of pure Caucasian blood. Tradition has it that they are the direct descendants of a grandson of Japhet, Togarmah by name, who settled in Armenia directly after the ark rested on Ararat, one of its prominent mountains. Haig, whose name they bore for a long period, was a son of Togarmah, and lived during the early part of his life in the vicinity of this mountain. He afterward emigrated with his sons and daughters to a region called Senaar in Mesopotamia, near where the tower of Babel was in process of building. A king by the name of Belus was then ruler of the Babylonian empire. Haig, unwilling to submit to his rule, returned with his family, numbering about three hundred persons, to his fatherland. There he identified himself with the people of his nationality in the neighborhood, who had by that time greatly increased in numbers, and soon became their acknowledged leader. Belus marched against him with a great army of trained warriors, iron-clad, and equipped with formidable weapons in the shape of spears and bows with arrows.

Yet destiny, the narrator goes on to say, was about to found a great nation, and construct a vast empire. The small band of Haig proved victorious. Belus fell by an arrow from his bow. Flushed with victory, he and his followers proceeded to make conquest of all the region lying between the Caspian Sea on the east and the Mediterranean on the west, and from the borders of Pontus on the north to the confines of Syria on the south.

It would seem, therefore, that this people, under their ancient name and valorous leader and his successors, played no unimportant part in the history of the then known world. They were great and formidable among the mighty nations of that early and eventful period in the world's history. Certainly, tradition assigns them no mean place among their cotemporaries.

Their present name seems to have been derived from Aram, the sixth in succession from Haig, who was so famed among the surrounding nations for his exploits that they called the land he ruled over Aramia, afterward corrupted into Armenia. Recorded history finds them occupying their present home, and they are referred to by Herodotus as dwelling there; also by Zenophon, who describes their manners and customs. In sacred history it is said that the sons of Sennacherib escaped into the land of Armenia. The prophet Ezekiel refers to this same country under the name of Togarmah, as furnishing Tyre with horses and mules, animals for which it is still famous. The kingdom of Ararat is one of the nations summoned by Jeremiah to aid in the destruction of Babylon.

Tradition affirms that the Gospel was very early preached in Armenia, by Thaddeus, who was closely identified with the Apostles if not himself one of the twelve; and that they were among the first to embrace Christianity as a nation, abandoning their former religion, which was that of the Magi. Authentic history relates that both their king and the whole nation became Christian under the preaching of St. Gregory, whom they styled the "Illuminator." From him sprang the name Gregorian, which has ever since been the name of the national or state church of Armenia. This Gregorian church is said to be the oldest national church in the world. The spiritual supreme head

of this church is the Catholicos, whose seat is in Russian Armenia. The Patriarch, residing in Constantinople, however, seems to exercise spiritual and some sort of temporal power over the Gregorian Armenians in Turkey. A bishop, formerly a priest in this city, appointed by the Patriarch, now resides in this country, having his seat here in Worcester, and under his bishopric are all Gregorian Armenians in the country. There are at present in the United States about 12,000 Armenians in all, three-fourths of whom are under his nominal jurisdiction ecclesiastically, but many of them have thrown off all obedience to his authority and are estranged from the church of their father. The remaining one-fourth are Protestants.

Various writers testify to the commendable qualities and superior abilities of this people. One says of them: "The Armenians have all the good qualities to make them the champions of civilization and progress in Asia Minor; and as to their qualities and virtues, they can appeal to an areopagus of historians, poets, statesmen and travelers." "It is difficult," says Lord Byron, "to trace in the annals of any nation less crime than in the Armenian, whose virtues are those of peace, and whose vices the outcome of oppression." Lamartine styles them the "Swiss," and another French writer the "Dutch of the East." Lord Carnavron rated them as the equal of the Greeks in intellectual power. Prof. James Bryce, after extensive travels in Armenia, which afforded him opportunities of careful study and observation, says of its people: "They are a sturdy race, with vigorous nerves and sinews, physically active and energetic, but also of conspicuous brain power. Thus they have held a very important place among the inhabitants of western Asia ever since the sixth century. If you look into the annals of the Eastern Roman or Byzantine empire, you will find that most of the men who rose to eminence in its service as generals or statesmen during the early Middle Ages were of Armenian stock. So was it also after the establishment of the Turkish dominion in Europe. Many of the ablest men in the Turkish service have been Armenian by birth or extraction. The same is true in regard to the Russian service. Among all those who dwell in western Asia they stand first, with a capacity for intellectual and moral progress as well as with a natural tenacity of will and purpose beyond that of all their neighbors, not merely of Turks, Tartans, Kurds and Persians, but also of Russians."

The Armenians first came to Worcester about twenty years ago, drawn hither mainly by the facilities afforded them for earning good wages. Only a very few families were among them until recently. Husbands left their wives and children behind, and young men their parents, expecting to return after a few years, when they should have accumulated enough money to enable them to live at ease in the home land, where the cost of living is so low, or to embark in some lucrative business. They did not therefore care about learning English, any more than was necessary for business purposes. They lived by themselves largely. Until about five years ago there were not more than eight or ten homes among them, although they numbered between five and six hundred.

As the result of the massacre, the married men living here brought their families to this country instead of going back to them as they at first intended. Other entire families were compelled to come, barely escaping with their lives. The whole number of these families now residing in the city is two hundred and over. Among them are many who were in their native land of high social standing, well educated, and possessors of considerable property. They are among the best representatives of their race. Since coming among us, stripped of all they owned of this world's goods, they have at once taken whatever offered in the way of employment. Many of them are at work in our factories. Others have opened little shops of their own. Among them are found doctors, lawyers, musicians, photographers, and architects, who will take up their respective callings as soon as

the way opens. Some have done this already. Others, especially among the young men, are preparing themselves for these various professions.

The Armenians as a rule are self-respecting, law-abiding, honest, frugal, home-loving—qualities certainly well worthy of commendation. They have excellent business capacity, are very intelligent within the limited range of their own language and literature, and are eagerly acquiring the knowledge of our English tongue, that they may enlarge the compass of their knowledge. They are bright-minded, quick-witted, ambitious, and progressive. They are never found begging, but freely help each other when in need, and are very sensitive about receiving assistance of any kind in the way of charity. Withal they are religiously inclined. It may be truly said of them that they are making the best of their present opportunities to get on and to get up in the world, and they have made remarkable progress already since coming to this country.

They realize as fully as do we that there are among them those who dishonor their nationality, and are a disgrace to the name they bear, and they deplore this fact more a great deal than is possible to us. But these are few in number, and not representative in the least degree. Hence they are not to be taken as a standard of judgment. Every nationality among us, the Armenians among the number, has a right to demand of us that we shall form our estimate of it on the basis of its best and not of its worst.

It is to be said to the credit of the Armenians of Worcester that here in this their adopted city they have organized the first churches, both Gregorian and Protestant, that have come into being in this country. Here also they have erected the first houses of worship. They have by their superior numbers resident in the city, and by the good name they have gotten for themselves, made Worcester to be known and recognized as the Armenian metropolis of the country. They take pride in that fact, and well they may. Their countrymen not only in New England, but elsewhere share in this pride. In their native land also, Worcester is held in honor as their chief city in the new world, and for what it has done in their behalf. They will ever stand for its good name and fame. The future of our city so far as they are concerned is safe. If only we deal graciously and in a brotherly spirit with them, they will more than repay our kindliness.

They are here to stay. Nor will they always stay in the background. They are bound to come to the front and make themselves felt in the future of our fair city. A people that long years of the most cruel oppression of the inhuman Turk could not crush, and whose dauntless spirit his bloody hand in cold-blooded massacre could not break, are not to be looked down upon and ignored. Notwithstanding the Sultan hates them, he has all along been dependent upon them. They have been, and still are, the brain and brawn of his land. He can not do without them. None of his Moslem subjects are at all a match for them. His jealousy of them is the chief reason of his brutality to them. How can such a people be aught but a valuable accession to our city life if properly respected and accorded their rightful place among us?

Let them receive, then, at our hands, what they so richly deserve, a brotherly welcome, the kindly aid they need in fitting themselves for citizenship with us, and a generous recognition of their worth and worthiness so fully exhibited, thoroughly tested, and abundantly proven in all their past history.

Harvard and Yale on Lake Quinsigamond.

A Retrospect.

MANY a time in distant rambles strangers have been heard to say, "Worcester? Oh yes, that is the place where we used to have the college regattas! What high old times we did have, too! I wonder if the 'Bay State' is still standing!" It is no marvel that the query arises in the minds of those who, in days agone, did their best to make life for the landlord more than miserable.

That from an early date the two principal colleges of New England should maintain a friendly rivalry, was natural. Both having excellent facilities for boating, it was equally reasonable that, descended from ancient vikings, Harvard and Yale students should early take to the water, and, with the innate disposition to compete, the only wonder is that contests did not come sooner. When they did begin, the chief question was where they should be held, and, strangely enough, for their first trial, in 1852, they went away up to the waters of New Hampshire's Lake Winnepesaukee; the next two, in '55 and '58, were on the Connecticut at Springfield. Then somebody with a consciousness of the fitness of things discovered Lake Quinsigamond, and for more than a decade, once a year the faces of many athletically inclined students were set towards Worcester. It would be a consolation to the antiquarian to know who the discoverer was and by what means the races were brought to this central city, but our quest now is rather with the events themselves and with the recollections of Worcester people of those truly strenuous days.

Amateur boating in this city began in a modest way in 1858 on the waters of Salisbury Pond, whence the neophytes and their boat were driven by the late Stephen Salisbury, who was afraid that the worthy young men might be drowned in the raging waves of this tempestuous body of water. It is just possible that the worthy gentleman had inherited some of his mother's watery apprehension, since George Bancroft, the historian, was wont to say that Madam Salisbury held him, Bancroft, in very slight esteem because of his frequent beguiling of her son away to sundry raft excursions on the surface of the near-by mill-pond. However, be this as it may, the Atalantas* next sought the southern part of the city, where, in Curtis' Pond, they had their fill of aquatic pleasures, and there they remained till they removed, boats and all, to the Lake. It is barely possible that they were the promoters of the college races which began here in 1859.

The course was north of the Causeway, from a line drawn between two stone posts still standing a few rods from either shore, and easily seen by any one passing over to the Shrewsbury side. It extended northward one and one-half miles to a stake-boat, which

*The Atalantas originally consisted of Nathaniel Paine, Chas. M. Bent, Henry A. Marsh, Lewis W. Hammond, Otis P. Abercrombie, James B. Kendall, Payson E. Tucker and Thomas J. Spurr. The latter, a member of the 15th Mass. Infantry, was mortally wounded at Antietam, Sept. 17, 1862.

was fixed between two similar posts near the bridge on the old road to Shrewsbury. Thus the course around the boat and back to the starting-line was three miles, a distance ample for the display of muscle and full long enough for the heart-action of any one, young or old. The event was a great one for Worcester, and each year a large sum of money was raised for expenses, the citizens always being ready to help along a worthy cause. Two days were devoted to the sports, for in addition to the regular college race, there were contests between other crews and individuals. Besides there were in the evening billiard and chess tournaments between Harvard and Yale, and, most delightful of all, a promenade concert in Mechanics Hall gave pleasure to both sexes, and more than a thousand hearts beat happily.

THE ATALANTA BOAT CLUB.

LEWIS HAMMOND. JOHN M. BARKER, CHARLES M. BENT,
NATHANIEL PAINE, JOHN S. BALDWIN, HENRY A. MARSH.

(It is noteworthy that, excepting Mr. Baldwin, all these gentlemen are or were engaged in banking. Mr. Hammond died April 11th, 1895; Mr. Barker, December 24th, 1896.)

In those days there were no dummy railroads nor trolley lines to make quick hauls to the Lake, but the Boston & Albany Railroad did its best to

help out in running extra trains, which were stopped just east of the deep cut, whence the people could take a nine-minutes' walk to the Causeway. There were no roads, scarcely paths, but the grass had been cut sufficiently to admit of unobstructed walking. The chief race was on the 26th of July, and an old programme, preserved by that lover of the ancient, Mr. Nathaniel Paine, gives the details in full. The race was set down for 4.30 p.m. In addition to the Harvard and Yale crews there was one from Brown University, two members of which were sons of the famous Baptist missionary, Adoniram Judson. The other members of this crew were E. Sears, C. D. Cady, C. H. Perry, P. S. Jastram and W. H. Ames. Their boat, the Atalanta, was a six-oared lapstreak, 44 1-2 feet long, carrying a coxswain.

Harvard's crew comprised Caspar Crowninshield, stroke, '60; Joseph H. Ellison, '59; Joseph H. Wales, '61; Henry S. Russell, '60; Edward G. Abbott, '60; William H. Forbes, '61. Theirs was a shell forty feet long, and their attire consisted of blue pants, white shirts and red handkerchiefs. The later condition of denudation had not then begun.

The boys from Yale, clad in light blue pants, silk shirts, and wearing light blue skull caps, were H. L. Johnson, '60, stroke; Fred H. Colton, '60; Charles H. Owen, '60; Henry W. Camp, '60; Joseph H. Twitchell, '59; Charles T. Stanton, '61, and Hezekiah Watkins, '59, coxswain; thus the Yales carried an extra man.

Harvard won by one minute, in 19 minutes, 18 seconds.

Of the race, the Spy of July 27 said:

The appearance of the banks on either side of the Lake was very picturesque and beautiful. The trees in ample foliage, along the entire length of the course, afforded a refreshing shade to the multitudes who witnessed the trial. Not less than one thousand people were on either shore, a large portion of whom were ladies. Considering the day, the conduct of the crowds was quiet and orderly, though the authorities had taken the precaution to close the bar of the Lake House, a tavern on the Shrewsbury side.

Concerning the contest itself, the very best account extant is from the pen of the Rev. Joseph H. Twitchell, the distinguished divine and a member of the Yale crew, the same having been prepared for the pages of a tribute to the memory of H. W. Camp, another Yale man of the same crew, who gave up his life during the war. His eloquent words conclude with:

In twenty minutes the first day's race was over. All the college boating world knows we were beaten in it, and that at evening Harvard bore into Worcester, with songs and shouting, the colors that pertain to victory. We shook hands all around—the two crews—and tried to take it easy on both sides, though of course it was not in exactly the same mood that we returned to our quarters and our friends to theirs.

At the promenade in the evening some of the most prominent of Worcester's younger men figured as directors, and among the names it is interesting to read; T. W. Higginson, Stephen Salisbury, Jr., F. B. Rice, Nathaniel Paine, J. E. Estabrook, Henry A. Marsh, and others. But there was a second day, and the Yale men, smarting under their defeat, were given a second opportunity to retrieve their fallen fortunes. Over the same waters at about 2.30 p.m. the same crews again bent to their tasks. How they wrought let their scribe, Dr. Twitchell, tell:

Once more we were off with a mighty clamor from the shore, each boat struggling for the lead. Yale won it. None but a boating man knows the glorious excitement—excitement without wildness—that then leaped through our arms into the oars. Everything went well with us, and we reached the mile-and-a-half goal four good lengths ahead; but the Harvards made a splendid turn, and we darted away on the home stretch almost bow and bow. The

fortune of the day trembled in even balances; less than ten minutes would decide it. "Pull!" cried our coxswain as if for his life, and we heard the Harvard stroke inspiring his fellows with brave words. Then came the hot, momentous work, the literal agony. Those twelve men will never forget it, though it is doubtful if any can or could recall it in detail. There is an indistinctness about it in my mind, at least, and the last half mile is especially cloudy. It would not be easy to describe it. Most accounts of boat races, like that of Tom Brown at Oxford, are from the standpoint of a looker-on rather than an actor. The real tragedy is in the boat.

The near neighborhood of the other contestant, not so much seen as felt; the occasional sidewise gleam of red from the handkerchiefs the Harvard men wore about their heads; the burning exhortations of the coxswain, "Pull if you die!" the pain of continued utmost exertion, * * * * all these remain indelible impressions of that fragment of an hour in 1859, but like the impressions which survive a stormy dream, they are not orderly or clear. I doubt if any one remembers the command to stop. For a minute or two there was utter collapse. * * * * * To our looks of inquiry the coxswain, whose thunder-bolts had suddenly dissolved in sunshine, made this sufficient reply, "We've got 'em." It had come at last! Hurrah, hurrah for Yale!

And so this victory by two seconds went to Yale, and the wearers of the blue went home to their commencement, heroes all, to be received and fêted as never before.

From the start, the place was a favorite with the boating world, and thousands of strangers sought it. "The Lake was pronounced by professional oarsmen the most convenient and beautiful sheet of water in which they had ever dipped an oar." Hotels were filled to repletion, and the hospitalities of private houses were drawn upon, and the extra trains on the railroad proved a veritable boon. More than 2500 people were thus carried. It should not be forgotten that, in the afternoon, a vast array of mortality was caught in a shower and an eastern bound train was held up to afford shelter to drenched humanity.

In 1860 the races came again. Once more the city contributed towards making the meet popular and successful. Three Harvard crews were at the Waldo House, and the columns thereof were wound with crimson and ensanguined banners were everywhere. So enthusiastic had the public become, the Public Library and the banks were closed on the second day. As in the preceding year, there were tournaments and the promenade concert. To the events themselves there was a steady outpouring of the populace, and above 5500 people were borne by the railroad alone, no mention being made of a probable equal number who sought the Lake by other means.

Into this race Harvard sent Joseph H. Wales, '61; Henry Ropes, '62; William H. Ker, '62; Edward G. Abbott, '60; Calvin M. Woodward, '60, and Casper Crowninshield, '60.

The Yale men were H. Brayton Ives, '61; Eugene L. Richards, '60; Edward P. McKinney, '61; William E. Bradley, '60; Charles T. Stanton, '61; Henry L. Johnson, '60, and Charles G. Merrill, '60, coxswain.

Over a course smooth and unobstructed the race was rowed, and Harvard won for the fourth time, though the margin had dwindled down to twelve seconds; time, 18 minutes, 53 seconds.

It was in this year that college enthusiasm had begun to warm up, and wearers of blue and crimson found themselves confronted with the majesty of the law. Of the events of the intervening night, the Spy remarked, "A part of the students who have been in the city this week have, at night, forgotten good breeding and substituted for it

manners of rather a questionable character. They have paraded the streets at unseasonable hours, making hideous noises, breaking windows, destroying signs and other property." The last night three of them were arrested. The next day, the three sophomores, all Harvard men, were arraigned at 11 a.m. and their cases were placed on file on payment of costs. In the same day, one Abbott of Lowell struck the City Marshal in the face.

The next three years found the land too deeply engaged in war to find time or disposition for aquatic sports, but in 1864, having grown used to Vicksburgs, Gettysburgs and Chickamaugas, the college boys came again.

This time the wearers of the crimson were Edwin Farnham, '66; Edwin C. Perkins, '66; John Greenough, '65; Thomas Nelson, '66; Robert S. Peabody, '66, and Horatio G. Curtis, '65.

Yale sent as representatives of the blue Wm. W. Scranton, '65; Edmund Coffin, '66; Edward B. Bennett, '66; Louis Stoskopf, '65; Morris W. Seymour, '66; Wilbur R. Bacon, '65.

Among the judges were the well-known names of F. B. Rice, Stephen Salisbury, Jr., Charles A. Chase, and John S. Baldwin. Raised seats were prepared on Regatta Point, and the old floating bridge was moored on the east side. The order was good, considering; there being only one outbreak at the "Bay State," accompanied by the breaking of furniture, though the "lads were gay." The wonder naturally arises as to just how these same men, who may now be alive, regard their earlier extravagances. The result of the contest was with Yale, who this year rowed without a coxswain, and for the first time scored an unqualified victory, winning over the crimson by 42 1-2 seconds in 19 minutes, 1 second. No marvel that the blues felt anything but what their colors might imply.

The year 1865 saw the surrender of Lee, and the people were ready for sports of every kind, hence there was a more than ordinary programme of contests at Lake Quinsigamond when the month of July arrived. In the first day, the 27th, the Quinsigamond crew, embracing John G. Heywood, Edwin Brown, Stedman Clark and Edward B. Hamilton, rowed the Unions, who were Timothy R. Green, Henry J. Temple, L. D. Thayer and James L. Anthony, in which contest the Quinsigamond won. The famous Josh Ward was umpire. The second day saw single-wherry trials between Josh Ward, John A. Biglin, Andrew McKee and others. The Quinsigamonds and Unions had given up their quarters to the Harvard and Yale crews respectively, and all the courtesies that the city had been wont to render were again extended. The water was smooth and glassy, and the best time yet made over the course was the result, viz., 17 minutes, 42 1-2 seconds, Yale winning by 16 1-2 seconds.

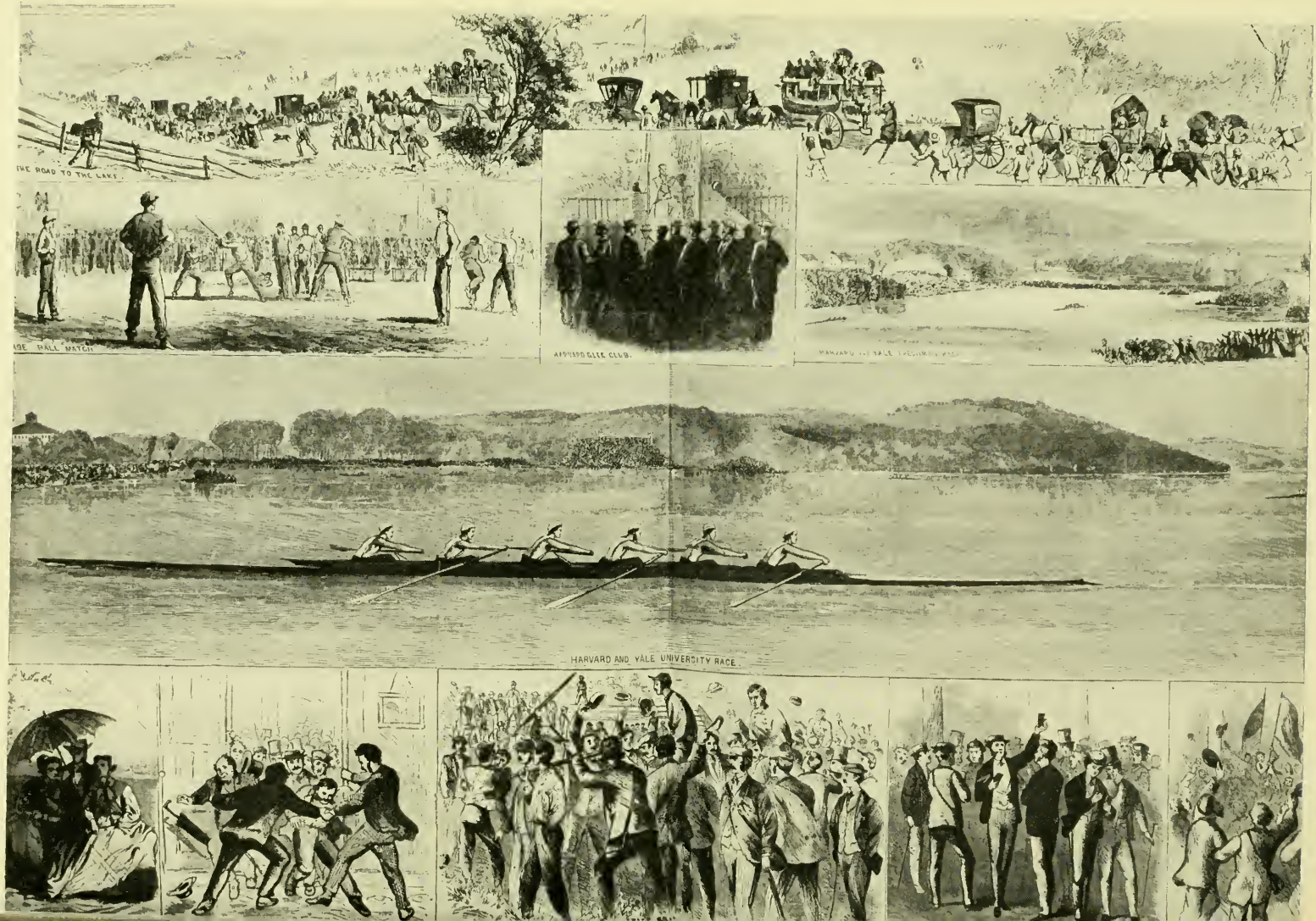
The rival crews were, Harvard: Charles McBurney, Edward H. Clarke, Edward N. Fenno, William Blaikie,* Edward T. Wilkinson, and Fred Crowninshield, all of the class of 1866.

Yale presented the same crew as in 1864, except that Isaac Pierson, '66, took the place of Morris W. Seymour.

Again the clans gathered in 1866. There were the usual digressions of baseball, chess, billiards, and promenade concerts, and again the city received the boys with open-armed hospitality. The Providence Journal discussed the situation thus:

The heart of our neighboring Commonwealth beats high with the pulses of young academic life, and divides its affections, we suspect, with no impartial measure between the athletic represent-

*William Blaikie for many years has been one of the most prominent writers on athletics in America. His "How to get Strong" has long been a classic.


THE ROAD TO THE LAKE.
BALL MATCH
HARVARD GLEE CLUB.
HARVARD AND YALE UNIVERSITY RACE.

atives of Yale and its favorite Harvard.

Very few, however, would sanction the charge of partiality as expressed above. Trojan and Tyrian were treated with no discrimination. The late Mayor Charles B. Pratt was chairman of the board of judges, and associated with him were Alexander Agassiz of Cambridge, F. B. Rice, William A. Smith, W. D. Hobbs, and Charles A. Chase. Though there were light showers, the water was smooth, and the race was seen by thousands. The time, however, was slow, going back to the 18-minute schedule, and was won by Harvard in 18 minutes, 43 seconds, Yale coming in 27 seconds later.

Harvard: Charles McBurney, '66; Alden P. Loring, '69; Robert S. Peabody, '66; Edward N. Fenno, '66; Edward T. Wilkinson, '66; William Blaikie, '66.

Yale: Frank Brown, '66; Edmund Coffin, '66; Arthur D. Bissell, '67; William E. Wheeler, '66; William A. Copp, '69; Edward B. Bennett, '66.

The next year, or 1867, brought a variation in the shape of Williams College with a baseball team to contest with Harvard, and the rather grewsome possibility of fatalities in that the grand-stand, upon which were seated 1200 people, fell, but luckily with no serious injury to any one. The date was July 19th, and the events opened with a trial against time by Walter Brown, champion of America. Once more the victory went to Harvard, whose time was 18 minutes, 13 seconds, her rivals coming in 1 minute, 10 1-2 seconds behind. The Hon. D. Waldo Lincoln made presentation speeches, and the boys were allowed their own sweet wills, making all the noise they liked, and they liked a great deal.

Harvard: George W. Holdredge, '69; William W. Richards, '68; Robert C. Watkins, '69; Thomas S. Edmunds, '67; William H. Simmons, '69; Alden P. Loring, '69.

Yale: George A. Adee, '67; William H. Ferry, '68; James Coffin, '68; William H. Lee, '70; Samuel Parry, '68; William A. Copp, '69.

The high-water mark of noise and misrule was reached in 1868, when the boys fairly outdid themselves in deeds of nonsense, to use no harsher term. After the promenade concert the lads apparently interviewed John Barleycorn or corn juice till they overleaped all bounds and got for themselves an exceedingly bad name. From the papers of the day it may be gleaned that twenty-six boys were arrested during the night of July 23-4, and on the morning of the 24th they came into court at 9.30 before Judge Hartley Williams. Fifteen were fined $20 and costs each, one was bound over in $500 to the August term of the Superior Court in Fitchburg, and ten were discharged. It seems that their songs the night before in the lobby of the Bay State, if not musical, were loud. Like Gideon of old these young men undertook the crockery-smashing act, and taking their wash-pitchers broke them against the street lamp-posts. Procuring a wagon, they drove like mad through the streets, yelling and singing, and throwing stones against houses. At one o'clock in the morning they came back to the hotel, whereupon City Marshal Drennan, with fifty policemen and twelve state constables, marched into the "Bay State." Not liking their company, the boys went out, mocking the civil forces who followed. In front of Brinley Hall the youths surrounded the officers and flagrantly insulted them. The lads were ordered back to their quarters, but they directly refused to obey, and openly defied all authority, under which circumstances there was nothing for the police to do but "run them in." When the regatta was over and the young men came back to the hotel for more fun, they found it so thoroughly policed that they packed up

their effects and quietly departed for home. Of this meet Harper's Weekly, August 15, 1868, under the heading, "The Annual Disgrace," says:

The youth of Worcester and of the country who are not college-bred see the stupid riot of the young gentlemen from the universities and feel only a contempt for unmanly rowdies and roaring bullies.

The sketch closes with advice to reform or quit. As to the race, it was won by Harvard in 17 minutes, 48 1-2 seconds, leading Yale by 50 seconds.

Harvard: the same as in 1867, except John W. McBurney, '69, rows in place of Thomas S. Edmunds.

Yale: Roderic Terry, '70; Sylvester F. Bucklin, '69; George W. Drew, '70; William H. Lee, '70; William A. Copp, '69, and Samuel Parry, '68.

The records have it that in 1869 the boys were amiably quiet, though pool selling was prominent. The race came July 23d, and was won by Harvard in 18 minutes, 2 seconds, Yale being 9 seconds behind.

Harvard: Nathaniel G. Read, '71; George I. Jones, '71; Grinnell Willis, '70; Joseph F. Fay, L. S.; Theoph. Parsons, '70; Francis O. Lyman, '71.

Yale: Roderick Terry, '70; Edgar D. Coonley, '71; William H. Lee, '70; David M. Bone, '70; William A. Copp, '69; George W. Drew, '70.

The final scene in Quinsigamond's college boating came in 1870, when, as for several preceding years, the representatives of the rival universities gathered in great numbers, and this time the trouble was not with conduct on the part of the boys, but a series of fouls and mishaps rendered the whole meet uncomfortable. The annual promenade concert was one of the best of the long series, and Stephen Salisbury, Jr., led the board of managers upon the floor of Mechanics Hall. Of the race itself, when it was all over, the Gazette remarked, "It may as well be acknowledged that the regatta yesterday, taken as a whole, was a lamentable failure." Edwin Brown was referee, and upon him devolved the exceedingly unpleasant task of trying to adjust and settle differences. A long series of defeats had rendered the Yale boys somewhat testy and possibly just a bit unreasonable, but be this as it may, the race ended in an undecided manner. Harvard was unable to accept Yale's request for another trial because of one of her crew having gone to his western home, and the Connecticut college went away very much dissatisfied, vowing that they would never more dip oar in the Quinsigamond waters, a vow that they have thus far kept. Yale's boat was first in; time, 18 minutes, 45 seconds, but the race was given to Harvard on a foul.

Harvard: Nathaniel G. Read, '71; Robert S. Russell, '72; James S. McCobb, '71; Grinnell Willis, '70; George I. Jones, '71; Francis O. Lyman, '71.

Yale: Carrington Phelps, '70; Wilbur W. Flagg, '73; William L. Cushing, '72; Edgar D. Coonley, '71; Willis F. McCook, '73; David M. Bone, '70.

Thus ended one of the most varied and interesting series of entertainments that Worcester ever beheld. While they brought with them some unsavory reflections, they were none the less full of excitement, and served to advertise the city more than any scheme ever devised by her people. A bad vow or promise is better broken than kept, and may we not hope that when the great bridge to supplant the Causeway shall have become a reality, and the college boys shall have realized that four miles straightaway is too great a test of human power, Yale will reconsider her rash determination of thirty and more years ago and once again stir the placid surface of our beautiful lake with her craft and oars? Worcester will give her and nearer Harvard the grandest of receptions. Situated as these two insti-

tutions are, so near in locality, size, reputation and age, their rivalries are naturally with each other. Their contentions go back of boating history in Princeton, Columbia, Pennsylvania and Cornell, and, nearly midway between their respective sites, lies this gem of a lake, affording unrivaled facilities for aquatic feats. We dare to look forward to the time when this dream will be realized.

Now that forty-three years have intervened between that race of 1859 and the present, we may ask, what of the boys who then were so alert and active? Stories of men are ever interesting, and to the records of their respective colleges we turn for information, and our blood thrills at the fact that every one of that first Yale crew served his country in the War of the Rebellion, and a majority of their Harvard rivals were equally devoted. Read the names, and know that of the Yale boys Johnson was an aide on the staff of General Ferry; he had been in the Signal Corps, but he sought a service in which there was more variety. Stanton was in the 21st Conn., Owen in the 1st Conn. Heavy Artillery, and each lost an arm; Twitchell was chaplain of the 2d Conn. Vols.; Colton, an army surgeon; Watkins, Colonel of the 143d N. Y. Vols., while Camp, a Hartford boy, taking a commission in the 10th Conn., was captured at the terrible assault on Fort Wagner, lived through long months of imprisonment, and returned to his home and to his regiment, to fall with his brave boys, October, 1864, in the engagement at Darbytown Road, his shoulders bearing the insignia of a Major.

Of the Harvard boys, Crowninshield and Forbes were both in the 1st Mass. Cavalry, though the former was transferred to the 2nd, of which he was finally Colonel, coming home a brevet Brigadier General; Russell went into the 2nd Cavalry also, but became Colonel of a colored cavalry regiment, while Abbott, a Captain in the 2d Regiment of Mass. Infantry, was killed at Cedar Mountain in 1862. In the Harvard, 1860, list is the name of Henry Ropes, who, a Second Lieutenant in the 20th Mass. Infantry, laid down his young life at Gettysburg.

A close study of these names would reveal many subsequently known to fame, including as they do McBurney, who, a distinguished physician, was summoned to the bedside of the dying McKinley; the eloquent Twitchell; Woodward, the famous educational innovator, whose advances along the line of mechanical training in Washington University of St. Louis have well nigh transformed the work in some institutions; Brayton Ives, the noted financier; Brown, a justice of the Supreme Court in New York, and Wilbur R. Bacon, the justly distinguished journalist.

Though the theatre of so much excitement, it is not a little remarkable that no Worcester name appears among the oarsmen from either college, the nearest approach being that of William A. Copp, who had the unique distinction of rowing on every crew throughout his college course, his home being North Grafton, then called New England Village. He died in 1901.

As to vital statistics it is doubtful whether the keenest scrutiny would afford much satisfaction, as it appears that training and effort have not particularly affected the length and strength of the lives considered. Through a very singular coincidence, just thirty-six names appear in each college list. Of these Yale has lost nine, Harvard ten, but the latter had two killed in war,

the former only one, hence the ordinary mortality is just the same.

Somewhere in this fair world of ours the remaining fifty-three men who formerly struggled upon the waters of our beautiful lake are still doing their part in life's battle, certainly no worse for the honest effort which they here put forth that they might win renown not for themselves, but for their respective colleges, a noble ambition, as real and as inspiring as any which, in subsequent years, has drawn them into the vortex of active, struggling existence. It was a mere breath of time which they gave to the trip around the stake-boat, but how they bent to their oars, and the discipline of it all, has told on every day of all the intervening years.

Books, New and Old.

Pine Tree Ballads, Rhymed Stories of Upland Human Natur' up in Maine, by Holman F. Day, from the house of Small, Maynard & Co., Boston. The writer in "Up in Maine" has already had his introduction to the world of readers, and past acquaintance warrants a warm welcome from those who like home truths told in homely manner. Possibly there is just a suggestion of Will Carleton in the mode of expression, but the writer is no imitator. The farmer in his own "rock-piled" farm, whose face beams upon us from the frontispiece, is a Maine man evidently, and the sweetly flowing measures that follow through the book are pleasant reading in the hot months of midsummer. "Feedin' the Stock" introduces us to the interior of the stables, and we seem to hear the munching of the "critters" described as the hay is pitched into their mangers so generously.

"John W. Jones" describes the tragic ending of a man who in his vicarious sacrifice did his part towards emulating the very foundation of Christianity. The themes are old and trite, but the treatment original and pleasing. Many a subject for the elocutionist's art will be found within these covers—subjects both grave and gay. The divisions of the volume are "Our Home Folks," "Songs of the Sea and Shore," "Ballads of Drive and Camp," "Just Human Nature," "Next to the Heart," "Our Good Prevaricators," "Ballads of Capers and Action." While some of the foregoing divisions might apply to other localities it is safe to say that the "Ballads of Drive and Camp" have the flavor that only Maine woods can afford. Such print and such easy reading invite to quiet moments when one can't get away to the woods himself, and here inside of a book are pictures and odors of what he longs to experience—a thoroughly healthful book.

The Tourists' Guide-book to the State of New Hampshire, published by Frank M. Rollins, Concord. The inventor of the Old Home Week evidently was in earnest when he proclaimed the desire of those who had remained in the Granite State to welcome back again those who had moved away. This was when Mr. Rollins was one of the most popular governors New Hampshire ever had. He refused to walk in the exact footsteps of his predecessors, and in many ways has left traces of original and valuable ideas, and among them the idea of a general, midsummer home-coming is so good that not only the New England but the Middle and other states have taken up the plan. That the seekers after the old may the better find subjects of their quest, the ex-Governor has compiled this volume of data covering the entire State. Indeed, it is a gazetteer of New Hampshire, with no less than fourteen excellent maps carefully folded within the book, which in form is much like the Baedeker of European travel. There is a comprehensive sketch of New Hampshire history, outline histories of each county, and every township is set forth in detail. Besides, there are alphabetical indexes of the towns and of the hotels and boarding-houses in the towns. There would seem to be nothing lacking if the volume also had indexed the many hills, mountains and lakes which have given to the State the name of the Switzerland of America. As it is, the book will prove an indispensable adjunct to him who would see the State which gave birth to Daniel Webster, John P. Hale and Salmon P. Chase.

SKETCHES OF SPENCER HISTORY, Vol. II, by Henry M. Tower, published by the author, 1902. In this volume of something more than two hundred pages Mr. Tower has compressed a deal of entertaining matter pertaining to the old hill town of Spencer. Evidently the writing is a labor of love, for everybody knows there is no money in town histories. Nowadays nothing in the literary line pays but novels, and if the bit of fiction can have a thinly disguised stream of nastiness running through, its success is all the more assured. In Mr. Tower's book, evidently suggested by his interest in the Bemis family, he has taken up the stories of Spencer industries, societies, churches, families and individuals. Among the latter may be found a sketch of J. Chauncey Lyford, for many years a Worcester schoolmaster. The volume is profusely illustrated, and ought to find a ready market among those who are proud of their Spencer lineage. While it is true that many, possibly the most, of the early families have moved either to the cemetery or to other localities, those who are living retain a lively interest in the town of their birth and, wherever they hear of the books prepared by Mr. Tower, will wish copies. A reading of them will be the next thing to visiting the old home, and in some respects it will be even better, for the author has collected and presented many facts wholly unknown to the average citizen; besides the books are veritable picture galleries of Spencer, past and present. Still another volume is promised. The prices of the books already printed are: Vol. I, $2.00; Vol. II, $2.25, postpaid in each instance.

THE PENNSYLVANIA-GERMAN is the title of a monthly publication by the Rev. P. C. Croll of Lebanon in the Keystone State. It is now in its third volume and has every appearance of prosperity. The July number has fifty pages of reading matter and a large array of illustrations. As we might expect, the themes are those suggested by the title. As a famous Pennsylvania-German we are introduced to the Rev. John C. Kuntz, D. D., whose wife was a Muhlenberg, and so related to the noted general of our American Revolution and to the equally celebrated author of "I would not live alway." Then follow four pages of local German rhymes, full of allusions; next a long article is devoted to an historical pilgrimage in Pennsylvania-Germandom; and every line is entertaining to him who delights in the colorings of near-by scenes. Finally there is the story of Mountain Mary, a religious enthusiast and recluse, who, early in the last century, attained considerable reputation for her deeds of kindness. Considering the large number of those who claim relationship with the German settlers of Pennsylvania, it would seem there could be found among them many readers of this invaluable magazine. It fills a gap in a literary-historic way, and we would that other similar themes might be equally well exploited. Why not in Poughkeepsie or Yonkers a magazine devoted to the early records of the Hudson and Mohawk River Dutch? What stories might be written of the Cortlandts, Van Rensselaers, Stuyvesants, Van Schaicks, Duyckincks, etc. The Pennsylvania-German is offered at $1.00 per year.

PUBLIC PAPERS OF GEORGE CLINTON, FIRST GOVERNOR OF NEW YORK. This is the title of a bulky volume put forth by the Empire State, having been compiled by Hugh Hastings, State historian, and is Vol. V of the series. These papers, covering the period of the Revolution, become of inestimable value to the student of history. There are illustrations of noteworthy characters of the day, and the work of the compiler is of the most careful character. This plan of the State of New York to place her historic treasures within the reach of all who care to read is one that might well be imitated by other commonwealths, particularly our own. Massachusetts has a vast accumulation of papers, dating back to her earliest period, very few of which have been scrutinized by appreciative eyes. In addition to the printing of the Revolutionary rolls, let us have, at some time, the state papers of the different administrations, at any rate so far as they bear on public or national affairs. The days of Caleb Strong, with his well-known hostility to the War of 1812, ought to make very entertaining reading. The work that Hugh Hastings is doing for New York should be followed by similar labors in all our states.

THE AMERICAN ORNITHOLOGIST continues to win deserved success. The Reeds, father and son, work in absolute unison, and both have the advantage of doing work which is play to them, i. e., they so love birds and the study of birds that their patience is seldom drawn upon to the pitch of weariness. The magazine itself as yet has portrayed only a small part of their observation right here at Worcester's very door. Sent for a whole year for one dollar, the monthly is a welcome visitor in hundreds of families.

Worcester Industries

IV.

The Making of Emery Wheels.

FIG. 1.—WORKS OF THE NORTON EMERY WHEEL COMPANY.

All of our readers are probably more or less acquainted with some form of an abrasive and its uses, and the most of them connect the word "Norton" with an emery or corundum wheel. A recent visit to the works of the Norton Emery Wheel Company at Worcester, Mass., proved so interesting that we have thought a short account of some of the things seen there might be of interest to our readers.

Figure "1" gives an excellent outside view of the works, which are located in the angle of a "V" between the Fitchburg and the Boston & Maine railroads. Spur tracks enter the place, and both outgoing and incoming freight is handled under cover; emery, coal, clay and other supplies are unloaded directly over bins without extra handling; passenger trains stop near the works, giving the best express and passenger service possible.

This business is something nearly a quarter of a century old, having been originally started by Mr. F. B. Norton in connection with his pottery business, the Company removing from Water Street, within the city limits, to its present location at Barber's Crossing some sixteen years ago, the total number of employees at that time being twelve, and at the present time about 350; the floor space occupied exceeds 140,000 square feet.

In addition to its Worcester plant, the Company is operating at Niagara Falls a plant for the production of artificial corundum.

This is proving superior to any other abrasive yet produced, naturally or otherwise. The raw material from which this is produced is placed in an electrical furnace and subjected to intense heat, the product being pure crystal corundum. This furnace runs

continually for several hours until a large pig or mass is formed weighing a ton or more. The casings are then removed from the furnace, and when the pig is cool enough to handle it is broken up into lumps and shipped to the factory at Worcester to be crushed, cleaned and graded into suitable numbers for the mixing of wheels.

The Company has recently completed a modern mill for crushing emery and corundum ore. The lumps are first put through a large crusher and then through a small one; from there it is conveyed to a series of rolls, each set reducing it in size. The material is then taken to the washers, where it is cleaned, and from there to an automatic drying machine, where it is thoroughly dried. It is then conveyed to the grading sieves, which separate the material into thirty different sizes of grains, the coarsest being No. 12, which means that the sieve through which it is graded has twelve meshes to the square inch, and the finest, No. 200. From the sieves it drops directly into kegs ready for use or shipment.

A special feature about the Norton crushing mill is that it is entirely automatic, the material not being handled at all from the time it is put into the crusher until it is delivered into the kegs, a finished product.

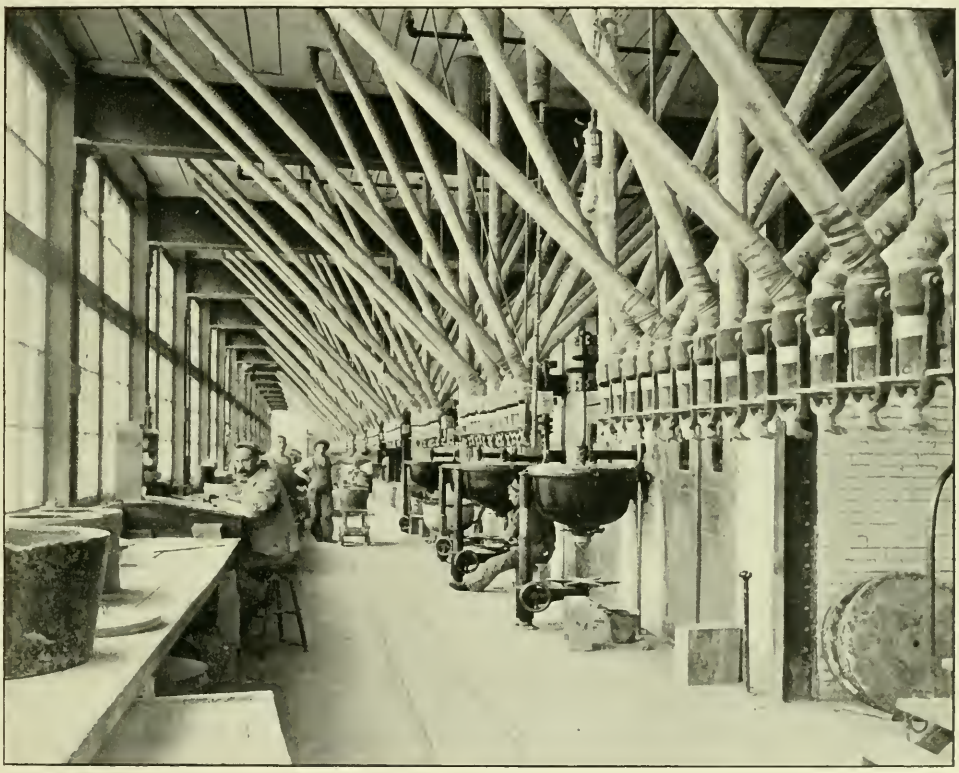


FIG. 2.—ONE OF THE MIXING-ROOMS.

Emery and corundum wheels are made by the Norton Company by three different processes known to the trade as vitrified, silicate or semi-vitrified, and elastic. By the vitrified process the emery or corundum is mixed with clays of different kinds, and is then subjected to high temperature.

Figure "2" is a view of one of the mixing rooms, showing the caldrons or kettles in which wheels made by this process are mixed.

Figure "3" shows what is termed a shaving-machine, on which the wheels are shaved. In the manufacture of vitrified wheels they are subjected to a heat approximating 2800 degrees. The kilns employed are very similar to potters' kilns, although the Norton Company has made many improvements. Figure "4" shows the interior of one of the kilns.

after being placed in the mould, is either rolled by means of hand rollers, or pressed under hydraulic pressure. They are then placed in a drying oven, same as the silicate wheels above described.

After the vitrified wheels come from the kilns and the silicate and elastic wheels from the drying ovens, they go to the truing-room, where they are placed on special machines, and the

FIG. 3.—SHAVING AN EMERY WHEEL.

In the manufacture of silicate wheels silicate of soda is used as the principal bond. After the mass has been mixed it is tamped into iron moulds, and the wheels are then placed in a drying oven for a period of twenty-four to thirty-six hours, when they are ready to be trued to size and shape.

The elastic wheels are manufactured by what is known as the shellac process, the principal bond employed being shellac. By this process the mass,

sides and faces of the wheels are made uniform. The holes in most of the wheels are bushed with a soft lead bushing to protect the mandrels or arbors on which they are mounted. After having been centered and trued, all the large wheels are carefully balanced. After this is done nothing remains but the testing of the wheels before shipment, and the Norton Emery Wheel Company is justly proud of its system and method of testing.

Each wheel is mounted on a testing-machine, and subjected to twice the recommended speed of the wheel when in actual use. One of the smaller size testing-machines is shown in Figure "5." The wheels are to be seen surrounded by an iron case while undergoing this test. After testing, the record of each wheel is entered on a prepared form indicating a description of the wheels, the number of revolutions, shape, order number, and for whom the wheel is intended. This record is signed and sworn to by the tester of the wheels each day before a justice of the peace, and oath made that the wheels have been so tested by him. These records are carefully kept, and by this the Company feels that it has done everything in its power to protect the user of the wheel as well as itself.

Figure "6" shows a view in one of the shipping-rooms. The arrangements for handling the heavy packages, and the convenient arrangements throughout the works whereby the various operations are performed and the wheels moved from one work-room to the next, are everywhere apparent.

In addition to the manufacturing of emery and corundum wheels, the Norton Emery Wheel Company has a large and increasing business in the construction of grinding machinery, having several large buildings or parts devoted to their manufacture. Probably no other name is as well known among manufacturers all over the world as that of "Norton" in connection with abrasive wheels and grinding machinery.

The basement of one of its plants is devoted to a store-room, where is carried at all times a large and complete

FIG. 4.—INTERIOR VIEW OF A KILN.

stock of wheels, composed of thousands of sizes and many degrees of grain and grade, so that it is possible in almost every instance for them to fill orders upon receipt. The necessity of this is apparent when it is understood that it requires about four weeks to make up wheels by the vitrified process. The number and variety of wheels necessary to constitute this stock are far beyond what would be thought,—in the matter of size alone they range from one-fourth of an inch in diameter to 60 inches, and from one-thirty-second of an inch to 10 and 12 inches in thickness; there is also a range of thirty different degrees of coarseness and as many in hardness.

Any order ever received by the Company can be duplicated with the utmost exactness at any time; this refers to the composition, cutting qualities, shape and size. A record is preserved of every order received for wheels, this record being so kept that the duplication of the order can be relied upon.

Few people realize the great variety of uses to which emery wheels are subjected. In the minds of most people an emery wheel is suggestive of the machine-shop, and few people indeed would ever look for the product of an emery wheel in the wearing apparel for ladies, yet the leather from which the well-known Suede gloves are made is finished on an emery wheel.

FIG. 5.—TESTING THE WHEEL FOR SAFETY.

There is hardly a manufactured article but has received sometime during the course of its construction a benefit or help either directly or indirectly from the use of emery or corundum wheels. Some of the largest users of emery wheels are manufacturers of agricultural implements, such as reapers, binders, plows, etc., while, of

course, the machine-shop could not get along without its wet tool grinder and miscellaneous wheels for sharpening cutters, reamers, taps, dies and other small tools.

In woodworking establishments emery wheels are now used to sharpen saws of all kinds, doing away with the use of the file entirely. A recent use to which corundum wheels have been put is grinding the edges of lenses for eyeglasses; they have also been satisfactorily used for grooving fancy glassware.

The health and comfort of the Norton employees have not been overlooked: wash-rooms, toilet conveniences and excellent systems of ventilation add materially to their comfort.

It has been the policy of this Company to be represented at nearly every exposition of any importance held during the last twenty years. Medals of gold, silver and bronze, and highest awards have been given them for the superior quality of the Norton products, highest awards being recently granted them at both the Paris and Buffalo Expositions.

Figure "7" illustrates their exhibit at Buffalo last year. The booth consists of wooden cornices supported by six massive emery columns composed of individual emery wheels, the cornice itself being ornamented with emery and corundum wheels of different colors and forms, combining to produce a most beautiful effect.

FIG. 6.—ONE OF THE SHIPPING-ROOMS.

The products of the Norton Emery Wheel Company are known throughout the entire world, and in addition to agencies throughout the United States they are represented in all the European countries, as well as in Asia, Japan, Australia, South Africa and South America. They also carry a large stock

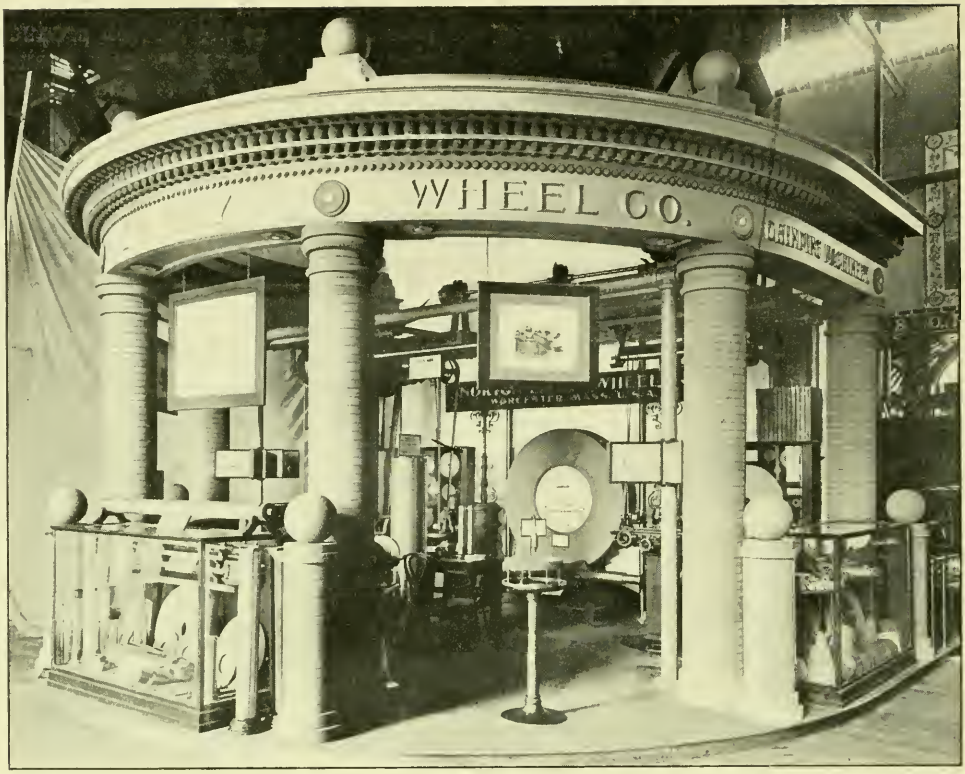


FIG. 7.—EXHIBIT AT PAN AMERICAN EXPOSITION.

of their goods at their stores in New York City and Chicago.

The works of the Norton Emery Wheel Company add much to the bustling appearance of Barber's Crossing. The nomenclature of Worcester is peculiar. The immediate locality is known as Barber's, the post office is Greendale. Sometimes, when the street-naming powers get down to business, they will revise the appellations peculiar to this vicinity. Meanwhile, passing thousands will cast their eyes to the northward to see the building where a considerable part of America's polishing appliances are made.

Worcester's Paving.

No subject in the Heart of the Commonwealth absorbs more attention than the momentous one of street paving. The City Council having failed to successfully grasp the matter, His Honor the Mayor rose equal to the emergency, and directed that Main Street, from Wellington Street to Lincoln Square, should be paved with block granite and cement filling. Workmen began July 21st at the south end of the work and are progressing northward. Citizens generally, whether devoted to asphalt or granite, rejoice that something is doing. Meanwhile, many are wondering as to the outcome of the paving investigation now in progress.

WORCESTER WOMAN'S CLUB

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The more closely one becomes acquainted with women's clubs and their work, the more one realizes that their influence is far-reaching. Instead of giving their attention wholly to self-education, they are constantly enlarging their scope and applying their acquired knowledge to the practical affairs of life. One of the latest movements of the Massachusetts State Federation of Women's Clubs has been the appointment of a committee to co-operate with the collegiate alumnae towards improving the elementary schools—a step that will appeal to the thinking men and women of our State and city when they realize that hardly one per cent. of our entire school population attains a higher education. To make their work more effective, this committee has chosen as an advisory committee the following expert educators: Dr. Thomas M. Balliet, chairman; President Charles W. Eliot, Secretary Frank A. Hill of the State Board of Education, Mrs. Alice Freeman Palmer, Prof. Ellen E. Carlisle, Miss Sarah L. Arnold, Miss Katherine H. Shute, Mr. Grafton D. Cushing and Mr. Samuel B. Capen, knowing that, wisely directed, the combined efforts of the club women and the college women of the State will make the schools what they ought to be. Circular letters have been sent to the presidents of the women's clubs belonging to the Massachusetts Federation, asking them to co-operate by appointing committees to undertake this special work. In response to this request the Committee on Public Schools elected by the Worcester Woman's Club at its April business meeting has been appointed. This committee consists of Mrs. Eliza D. Robinson, chairman; Dr. Mary E. Barrell, Mrs. Florence E. W. Bliss, Mrs. A. Louise McCullagh and Mrs. Helen A. B. Morse. With such an earnest and intelligent body of men and women working for the public good, one can but feel that success will crown their efforts.

SUNSET MAGAZINE. From the Pacific coast comes this fitly-named periodical, plentifully illustrated, and furnishing more than seventy pages of entertaining reading matter. Any one who has ever visited San Francisco will welcome the appreciative sketch of the "Mission Dolores." "Wild Flowers of the Peninsula" give glimpses of a new floral world. Edited by Charles S. Aiken. Published by the Southern Pacific Railroad, 4 Montgomery Street, San Francisco.

THE FOUR TRACK NEWS. This is the unromantic, quite prosaic title of the monthly magazine which represents the interests of the New York Central & Hudson River Railroad. Its pages, however, are exceedingly varied and attractive. From the "Home of the Caribou" (Newfoundland) to "Coming Events," every article is instructive and so alluring that every reader would like to hie away for rest and health to the places described. John K. Le Baron, editor, Grand Central Station, New York city.

What People Might Think.

"Still, when the sun of summer burns,
My longing for the hills returns."

Whittier.

SO far as new enterprises are concerned August comes as near being a quiet month as Worcester has during the year. All who can get away leave the city on every sort of errands, the most prominent of which is the desire to escape the heat of paved streets and crowded residences. Yet, at its worst, Worcester is a veritable paradise compared with the terrible tenement districts of New York, Chicago, and all great centers, where humanity prefers to swelter, suffocate and die rather than breathe the pure air of heaven under the blue sky of the country.

YET the cupidity of man in our own country city is getting the better of his judgment, and many a back yard is made to harbor a rear house where the children of the front tenement should have the right to play at will. At present they have the run of the street, and there are many thoroughfares in Worcester through which drivers are obliged to go with the utmost care lest they run over the little ones. That there are not more accidents along the street railway lines must be ascribed more to luck or good fortune than to the care of parents and police. Oh! for the days of home! real old-fashioned home, where parents knew the whereabouts of their children and did not leave everything to teachers and public officials.

AKIN to this subject is that of public playgrounds for the children of both sexes. There are just two properly constituted locations in this city where children can get rid of surplus energy without danger of infracting some of the municipal ordinances. These are the East and Crompton Parks. He must be an unusually stolid individual whose heart is not moved at the appreciation obviously felt, by those directly interested, for the ball grounds and the wading facilities afforded in East Park. The name indicates only direction, but a fitting appellation would be "Good-times Park," for here there is no grass to be preserved, no flowers to be protected, nothing to look out for, but all may pitch in and have all the fun they like. The inviting water in the shallow pool woos to comfort and health, and many a child gets here every day what were impossible otherwise. The swings are always in motion, and the men and women of tomorrow are to be stronger for the recreation afforded.

THE city of Waltham, it is said, is about to lay out $50,000 in the way of buying and developing a system of playground for the youth of that beautiful city. The amount already expended by Worcester for public parks is not excessive, but along with that expenditure should have gone an equal or greater amount for the laying out and the proper policing of open spaces where young people may grow strong and merit approval in so doing and not be subject, at each and every turn, to the hand of a policeman, who tells the children that they are criminals in the sight of the law. There are many important matters constantly before our City Government, but there can never be any subject of greater moment than the question as to how shall we train our children aright. Money laid out in developing recreation grounds will be more than saved in the lessened expense of police courts, truant schools, reformatories and doctors' bills.

ALONG with this thought, it is proper to mention the prevailing evil in Worcester and in all thickly settled localities of stealing fruit. If the subject of my neighbor's rights is

ever discussed in the public schools, the fact has very little outward evidence, for the children of both sexes are apparently absolutely ignorant of the existence of any moral obligation to leave the property of others entirely alone. Says one dweller in our midst, "I don't want an inch of soil to supervise. I'll buy all my provisions, and whatever I possess shall be constantly under lock and key." Says another, "Blessed be nothing," meaning thereby that if he had nothing, he could lose nothing. Only those underrate the crime of fruit stealing who have nothing of the kind to be relieved of. The late Joseph Perry of Ward 5, when a member of the Legislature, tried to secure a bill which should assure to him the enjoyment of some of the fruit which he raised on his city farm, but he was outvoted, and young Jackanapes continues to thumb his nose at owners, and his parents enter suits for assault if, at the hands of irate owners, he receives a deserved spanking. How long, O Lord, how long?

THE examination for admission to the Naval School at Annapolis came and a large number of candidates presented themselves. Of the entire list D. J. Greelish of 18 Barclay Street was found to merit the first place, and to him Congressman John R. Thayer awarded the appointment. The successful candidate is the son of Denis F. Greelish. Perhaps the above statement, as to his standing first, should be qualified by the fact that the first place was attained by H. H. Schuermann, who was too old for the position. Schuermann was the alternate of Daly, who has been admitted to West Point. Apparently his only hope for an appointment to the latter institution lies in the improbable failure of Daly to keep up. There were five alternates named along with Greelish, viz., Willard F. Osborne of Worcester, Herman Wright of Sturbridge, Leo Welsh of Worcester, Allen H. Hackett of Worcester, and Alfred A. Gervais of Westboro. With the expansion of the sea power and armament of the United States, it would seem that the Navy in coming years were to offer greater attractions than the Army. Greelish has been ordered to report at Annapolis August 11.

THERE are thousands of patriotic citizens who are thoroughly glad that another Fourth of July is in the past. Possibly quite unwittingly, we have allowed our great national day to become Chinesed, and with characteristic American zeal and energy we have far outdone the Celestials themselves. How many times have we heard returned travelers tell of the noise-making proclivities of the Orientals, and have wondered that full-grown people could find any delight in such nonsense, but we have seen the Asiatics, and have gone them many times better. People who have property, on the Fourth are obliged to remain at home and protect it. One year ago a dweller on South Russell Street found an extinguished fire-cracker thrown into the manger of his horse, and that the barn was not burned by this bit of mischief was not owing to any good will on the part of the miscreant, but to the good fortune which sometimes attends us. Forty-one times did the Boston Fire Department respond to as many alarms on the last Fourth, and our own fire laddies ran twelve times. To be sure, some of the alarms were "only in fun," to quote the precious rascals who thus trifle with property and life. The general sweeping up of debris throughout the nation is a terrible arraignment: scores of lives lost and limbs lacerated, to the enriching of the doctors only. When John Adams foresaw the ringing of church bells and the firing of cannon, he had no notion of the possibilities of dynamite and the cannon-cracker. Would that later generations might be equally ignorant!

WORCESTER BOARD OF TRADE

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Board of Trade Notes.

Mr. Rufus B. Fowler, recently President of the Board of Trade, is enjoying a trip abroad. Accompanied by his wife, he sailed July 5th on the Cambroman of the Dominion Line, expecting to touch at Gibraltar, and to arrive at Naples on the 18th. After seeing Naples, they will proceed to Rome and to Venice, where they will be the first Worcester people to view the ruins of the famous Campanile. They will travel northward through Switzerland, and, after going down the Rhine, will visit The Hague, where a stop of some duration will be made. Their faces will be set homeward on the Saxonia, sailing from Liverpool September 8th. With Mr. Fowler's known interest in municipal matters, it is to be hoped that he will find some items which will be of interest to the readers of this Magazine. In any event, all wish both Mr. and Mrs. Fowler a most happy and profitable excursion.

The strikes among machine workers, builders' finishing and house carpenters, after continuing several weeks, have all been declared off, and, as far as possible, the workmen have resumed their old positions. The leaders declare Worcester to be a hard place for the maintenance of a strike.

The Transportation Committee, to which was referred the subject of the more rapid transportation of perishable freight, has, through its chairman, Mr. Paul B. Morgan, attended to this duty, and very satisfactory results have been secured from the railroads involved.

The New Enterprise Committee is holding occasional meetings during the vacation season, and several new projects are under consideration. It is to be hoped that while new schemes are furthered, no old or established concern will be allowed to leave Worcester. The old as well as the new is worth looking after.

It is a source of gratulation to all Worcester people that measures are afoot to erect at an early date a cold-storage edifice, adequate and convenient. The wonder is that it has been so long delayed.

THE ROYAL BLUE is the title of a most attractive exchange to be found on the Board of Trade table. Exploiting the interests of the Baltimore & Ohio Railroad, it presents to the reader a fascinating array of facts and fancy. Every page is a delight.

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THE WORCESTER MAGAZINE

SEPTEMBER

1902

DEVOTED TO

Good Citizenship and Municipal Development

PUBLISHED MONTHLY BY THE BOARD OF TRADE

WORCESTER, MASSACHUSETTS,

U. S. A.

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WORCESTER AS A MANUFACTURING CENTRE,
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Write to the Secretary of the

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Worcester, Mass.

HIGHLAND MILITARY ACADEMY, PARADE GROUND.

The Worcester Magazine.

VOL. IV. SEPTEMBER, 1902. NO. 3.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

Highland Military Academy.

THE time is rapidly approaching when the Academy may celebrate its semi-centennial, since it was in 1856 that the school was founded by the late Caleb B. Metcalf, who retained his interest in the same as long as he lived. It was on Oct. 5th of that long-ago year that Mr. Metcalf added a school to one of Worcester's seven hills. He did not start in a large way, but with the thought of quality rather than quantity. At first the capacity of the institution was sixteen boarders and twenty day pupils. Of course that limit was long since advanced, but having spent a number of years in crowded public schools, it was evidently in the founder's mind to avoid the faults so long deprecated there. A graduate of Yale, class of 1842, thereby a classmate of Hadley, the famous Greek grammar-maker; Theodore Runyan, New Jersey's Chancellor; J. H. Trumbull, student of the Indian languages, and Judge John A. Peters of Maine, he early devoted himself to the profession of teaching, and for ten years had been one of the most successful of the grammar-masters in Worcester. He had a right to be a good teacher, for he was descended from Michael Metcalf, the first schoolmaster in the old town of Dedham.

Long at the head of the Thomas Street school, he impressed himself on a wide range of youthful humanity, so much so that to this day survivors refer to the times when they were obliged to "behave," and to learn whether they would or not. The city would have gladly retained his services, but he had plans of his own, and, as stated, he proceeded to start a private school, which, without endowment or public aid, is nearing its fiftieth anniversary. While the list of those assisting in the direction of the school is an extended one, a prominent secret of its success is found in the fact that it has had only two principals or superintendents.

The location selected by Mr. Metcalf was just a little north of the spot on which stood the birthplace of George Bancroft, the historian, and when the first boys wended their way out into the country, they passed the original house,

then standing in all its antiquity, with the solid stone wall in front, a tribute to the hard yet excellent work of the preceding century. Among those earliest lads were some who in the terrible days of the coming war were to put in force some of the attainments here gained. Sheriff Robert H. Chamberlain was in the first class, as were James Green, Esq., and the late Edward P. Goulding. At the beginning, the patronage was

C. B. METCALF, FOUNDER,
In Middle Life.

drawn more largely from the home city than in later years.

It was not till 1858 that military drill was instituted, "to afford amusement, promote health, improve the figure and personal carriage, and make the good citizen." All these motives were admirable, but the founder builded much better than he knew, for his improved figures and good citizens, in the din of the coming storm, were to make all the better soldiers for the taste of mimic warfare gained on the parade-ground of his school. Up to and including the year 1864, there were 298 different boys in the Academy, coming largely from Massachusetts, but representing in all nineteen Federal states, including the District of Columbia and the Republic of Mexico. Coming from so many and from such diverse directions, it has been very difficult to secure accurate data as to the war record of all. However, it is certain that fifty of the boys found their way into the army, and many of them now fill honored graves, a part of the nation's sacrifice on the altar of Liberty. Wherever they were, they gave good accounts of themselves.

The entire space devoted to this sketch might be used in telling of the deeds of bravery of the men who, as boys, sported where their successors are found to-day. Both of the Bacons, Will and Frank, went down in the rush of battle; Green, Grout and Hacker, all tasted death amid the clash of arms; Jameson met his fate while obeying his commander's orders in trying to act the spy in Richmond, but rather did he honor the scaffold than the latter disgrace him. Darius Starr and George W. Wellington suffered and died amidst the horrors of Andersonville. Lewis M. Brooks and others perished of disease. It is said that Henry M. Bragg was the soldier to whom was assigned the honor of raising the flag over Sumter in April, 1865, and Worcester people have long been familiar with the names and figures of Sheriff R. H. Chamberlain, Major E. T. Raymond, Capt. Charles H. Pinkham, William H. Hobbs and the late Capt. Levi Lincoln of our own city. No name in Highland Military Academy annals is brighter than that of Lieut. J. W. Grout, 15th Massachusetts Infantry, who fell at Ball's Bluff Oct. 21, 1861, and in

THE ORIGINAL BUILDING.

whose memory were written the immortal lines of the "Vacant Chair."

The highest rank attained by any one of the cadets was that of Brevet Brigadier-general, a commission of that grade having been issued to William N. Green, Jr., who lost his life as Lieutenant-colonel of the 173d New York Infantry. Capt. George E. Barton of the 57th Massachusetts survived the war a number of years; Henry H. Wilson was a son of the late Vice-president, but of whatever birth or rank, these soldiers were the better for the drill and knowledge secured here. The high-water mark of attendance was reached in the darkest days of the Rebellion, when, in 1863, there were had as pupils eighty-seven boys; in 1862 there were fifty, while 1864 sent out sixty-eight cadets. There seemed to be a prevailing thought that if the war were to last and boys must go into it, they had better go as intelligently as possible. A stream cannot rise higher than its source, and the prime source of military instruction at the Academy was the late Col. John M. Goodhue, who by common consent was as fine a drillmaster as ever stood before a squad of men. His record lays hold on the stories of the officers and men who at the onset represented Worcester in the field. He was ever proud of the fact that he first instructed General Devens in the school of the soldier. To him, excellence in drill was the one great thing to be attained, and under him progress could be made if the soldier were disposed. Enlisting early in the war, he became Adjutant of the 1st Battalion, and later a Captain in the 11th Regulars, and as such served through the war and till 1871. His title of Colonel came from militia service before the Rebellion. Among his successors may be found the names of Colonel E. B. Glasgow and Major L. G. White, both noteworthy citizens of Worcester. In the Spanish War, too, the Highland Military Academy boys were in evidence, and one at least met a soldier's fate at San Juan Hill.

Mr. Metcalf's ability was apparent in his choice of helpers in the work of instruction. William A. Bushee, who taught Greek, English and ethics, was a Yale man and is now a clergyman, while his father, James Bushee, A.M., came in 1864 and remained till 1876 as teacher of natural science, and few, if any, better have labored in this city. In this con-

LIEUT. J. WILLIE GROUT,
15th Massachusetts, Killed at Ball's Bluff.

nection it is noteworthy that a grandson, F. A. Bushee, Ph.D., is to be an instructor in the new college department of Clark University. Fred W. Tilton, later principal at Andover and in Newport, R. I., High School, came here directly from his graduation at Harvard; C. T. Haynes, who in this year, 1902, finished his long career as a teacher in the public schools of Worcester, made his advent to this city by way of the Academy, as did also the late A. S. Kimball, so long connected with the Polytechnic. However, by far his best find was in the person of Joseph Alden Shaw, who came in 1867, and in time became the second superintendent of the school.

COMMANDANT AND CADET OFFICERS, 1895.

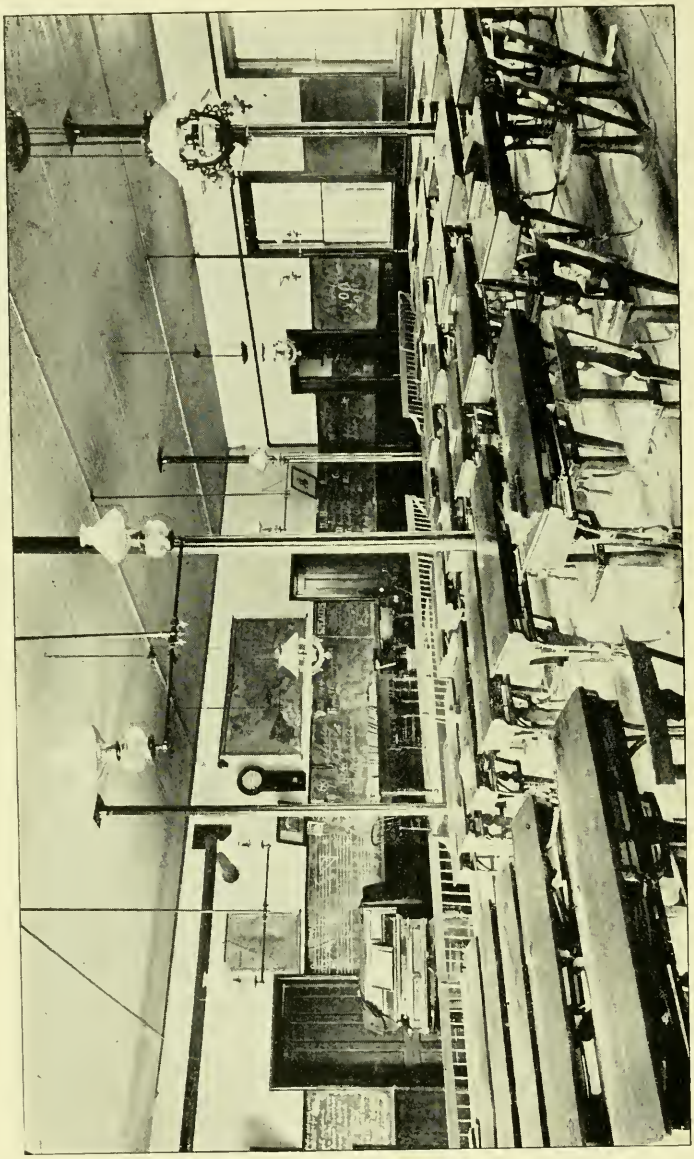
First Lieut. Iverson. Second Lieut. Moore, Com. S. B. Clark. Capt. Renne.

The superintendent saw his plant grow from its modest beginning of one house and a barn to the dimensions at present maintained. The last catalogue in which his name appears as an instructor was that for 1868-'69; after that time, till he laid down his duties, he was the manager, giving over the work of teaching to others. He was a strict disciplinarian as well as an excellent instructor. When a gentleman, whom the Worcester of today calls Major, as a boy in the school was asked by his teacher, a lady, if Vermont had any seacoast, "Not much," was the ready answer, its purport depending entirely upon the accent employed. The woman was angry in a moment and sent the lad to the superintendent as being uncivil. "Well," says the veteran, "what is it?" As the boy has described the incident, the face of Mr. M. twitched with something evidently not anger as he heard the recital, and, turning away to conceal his expression, he said, "Can't you make some sort of an apology to the teacher, for I don't believe you intended to hurt her feelings?" "But," says the boy, "the State hasn't any seacoast, and I can't make it have any." However, he was persuaded to try to mollify the incensed mistress by mild words, and he appeased her feelings by saying that he wished to apologize for his remark, though he still couldn't make out that Vermont had much if any seacoast. On another occasion, Mr. M. was nearly hit by a slate, shied at his head by an irate youngster from the Spindle City, or Lowell. Turning upon the youth the superintendent said, "Do you pick up your books and effects at once, and go home. For such conduct there can be but one of two endings, either the penitentiary or Congress." As the lad in question afterwards graduated from Amherst, served in Congress, has been Assistant Secretary of the Navy and Governor of Porto Rico, not to mention his candidacy for the Governorship of Massachusetts, it might appear that there was more truth than fiction in the enraged teacher's remark.

Mr. Metcalf's direct connection with the school terminated with the school year of 1888, though till his death his name was borne as superintendent *emeritus*. From the old Academy home he removed to No. 36 Lincoln Street, and there lived till the death of his wife, March 7, 1890. He was married to Miss Roxanna C. Barnes, a sister of the New York publisher, A. S. Barnes, it is said, the day after his graduation, and their married life was one of unusual happiness. No small part of the success of the school was owing to the kindly and motherly care of the superintendent's wife. Subsequent to her death, he was in Worcester but little, and his death finally came July 31, 1891, at the summer home of his daughter, Mrs. McElrath, in Seabright, N. J. His burial from Central Church Aug. 5 was attended by a large number of those who had known and appreciated him during his life among them. A token of the respect in which he was held by his fellow citizens is found in the fact that from 1869 to 1881, both years inclusive, he was a member of the School Committee, for the most of the time assigned to the care of the High School.

Joseph Alden Shaw, who succeeded Mr. Metcalf, had been long associated with him. Born in Athol, the son of Linus Hall Shaw, a Unitarian clergyman, he was early sent to Phillips Exeter and thence to Harvard, whence he was graduated in 1858. Among the most noted of his classmates were Dr. George E. Francis and Librarian S. S. Green of Worcester; George A. Wentworth of algebra and geometry fame, and Wins-

low Warren of anti-imperialistic repute. Superintendent Shaw's middle name proclaims his Mayflower descent, and he is justly pleased at the fact that he is in the eighth generation from him who was enjoined by Priscilla to speak for himself. Some of his earliest teaching was done in New Salem Academy, Franklin County, where he married and whence he came to Worcester, and here he has been all the intervening period, save from 1881 to 1887, one year of which time having been spent in Cincinnati, and the most of the remainder at Tivoli-on-the-Hudson. When the infirmities of age began to tell upon Mr. Metcalf, he turned to the man who had been longest with him, and after the year 1887-'88, he passed the whole equipment over into Mr. Shaw's hands. Nor could he have



THE SCHOOL-ROOM.

done better, since the school has gone on in the interval with no ripple of trouble. As it was begun, so it has continued.

The original idea of making an institution where boys might receive more personal attention than from the nature of things they could have in the public schools, has continued, and added thereto is the item of military instruction, discipline and drill. Very likely when our friends of the Universal Peace Society shall have prevailed upon mankind to cease from war, when humanity becomes

JOSEPH ALDEN SHAW,
Superintendent.

willing to refer all its disputes to the jaw-bones of—lawyers, then, and not till then, will martial trappings cease to be attractive to the youthful mind. We of this city have grown used to the handsome, gray, close-fitting uniforms of the cadets, and should count it a great loss were anything to take them from us. They have been worn by a long line of illustrious predecessors, and in the future we hope to see an unending line continued by boys yet unborn.

There is just enough of history in the surroundings of the school to give it a pleasing gloss to him of curious bent, and the outlook is delightful to the lad who is given rather to the pleasures of sight. To the eastward he may see the sun rise over Green Hill, and in the intervening valley behold a scene of industry such as few other places in the world can offer, for in that hollow are located the north works of the American Steel & Wire Company, not only the first, but one of the most important of the billion-dollar plant. Grouped around them are kindred industries whose development and progress keep employed thousands of skilled workmen in this the busiest city in New England. Hard by Salisbury's Pond, which he almost daily passes, is the Institute Park, containing its reproduction of the Northmen's tower of Newport, and laid out in a manner to capture the eye of every beholder. Here is the Boulevard, the widest and finest thoroughfare in or about the city, and near at hand are some of the most elegant of the stately mansions in which the city abounds. A granite block with bronze tablet tells the story of the birth of George Bancroft, and on yonder hill, up which a winding road climbs by gradual ascent, is the old feudal tower with its gateway, the most sightly object as the city is approached from the northward. This hill bears the name of Bancroft, and if the Academy boy does not get the name and story of the historian completely by heart, it will not be the fault of his school.

The grounds of the Academy are capacious and ample. Mr. Metcalf at first was almost alone. The Bancroft house was the nearest neighbor to the southward, and towards the north there was little till he came to the old cow tavern, long the residence of the late Mr. F. P. Stowell, but the march of population has been in his direction, and stone walls and cow-pastures have given way to stone

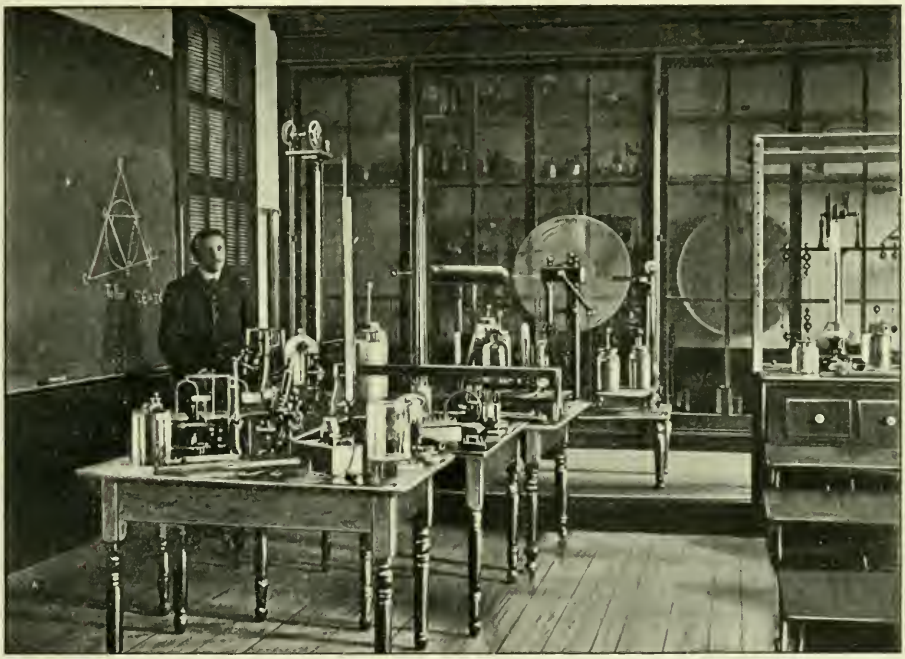
curbing and lawns, till the man who was a boy in the fifties and sixties would be far from recognizing his former playgrounds should he return to find them. Still, the grounds themselves remain much as they were. The facings and marchings are had just as they were more than "twenty years ago." The lads who respond to the bugle-call in this beginning of the twentieth century may not catch the martial strain as did their predecessors in the early sixties, but they are getting ready for just as useful and vigorous citizenship.

While the lads are subjected to the most approved form of military discipline, they are not necessarily prepared for the life of a soldier only, since they may here prepare for college or for business. Each year the Academy sends its complement of boys to the best of New England and other colleges, and also sends out a large number prepared to enter at once upon the battle of life, all the stronger for the rigid routine to which they have been subjected. Their quarters in the buildings are ample for boyish needs; and their table-fare is calculated to maintain the best degree of physical strength. The teaching force is up to the highest standard constantly, and, best of all, the pupil is under the constant care of competent men. From the start the Academy has had the encouragement of some of the very best people in the Commonwealth and country, and to-day among those referred to are the Bishop of the Diocese of Western Massachusetts, clergymen, lawyers and physicians of Worcester, with teachers and business men. The military references are equally valuable, including as they do some of the most prominent names of veterans and active militiamen in Massachusetts. In the past, Anson Burlingame sent here his son, as did the Hon. A. H. Bul-

THE CHEMICAL LABORATORY.

lock, Hon. Charles B. Pratt, and many others. When the rallying-time comes in 1906, it will be a merry crowd, which includes such local notables as Major E. T. Raymond, Frank A. Leland, Col. A. George Bullock, Charles T. Pratt, Capt. Charles H. Pinkham, William H. Bliss, Wm. H. Workman, Ben T. Hammond, Alfred Dwight Foster, and others, not to mention the hundreds of later years. Were all those eligible to really come, we should see Chester S. Lord, for many years business manager of the New York Sun; Commander Joseph Giles Eaton, who once directed the Massachusetts training-ship Enterprise, now in command of the Oregon; E. W. Roberts, M. C. for the 7th Massachusetts District, and possibly from California might come U. S. Marshal Nagle, who in 1889 so valiantly defended the life of Justice Stephen J. Field of the U. S. Supreme Court.

In the earlier days it was the custom to take the cadets annually upon an excursion more or less prolonged, and by exhibition drills give the Academy an excellent advertisement. In this way the boys have drawn praises from the papers of Boston; Newport, R. I.; Providence; Gloucester; Brooklyn, N. Y.; Keene, N. H.; Hartford, Conn.; Springfield; Portland, Me.; Bangor, and Concord, N. H. Perhaps the crowning glory in these expeditions was the encomium bestowed by the Army and Navy Journal of July 15, 1867, from which we read:



THE PHYSICAL LABORATORY.

The Highland Cadets, who visited the cities of New York and Brooklyn last week, are the pupils of the Highland Military Academy of Worcester, Mass., of which C. B. Metcalf is superintendent. On last Thursday afternoon the cadets were reviewed by the acting Mayor at the City Hall, New York, and they gave an exhibition drill on the evening of the same day at the State Arsenal, Thirty-fifth Street. On Friday they were reviewed by Mayor Booth of Brooklyn.

THE CADET CORPS, MARCHING ORDER.

* * * They had a good day's work of it on Thursday, for they marched from the Providence boat to the Armory of the 23d Regiment, and thence in the afternoon to the City Hall, New York, where they were reviewed and exercised in company movements. * * * * In point of endurance the cadets are equal to most companies of men. It was very evident from the manner in which the cadets drilled that they had been well and carefully instructed. * * * Some of the fancy movements in the manual were very finely executed. * * * The loadings and firings they also did so remarkably well that we wished the second company of the 7th Regiment had been present also, in order that we might have been able to form a judgment as to which company could do the best. We think the decision would have been a hard one to arrive at. In company movements the cadets did as well as in the manual. On Friday afternoon the cadets returned to Worcester, having very favorably impressed those who witnessed their movements by the manner in which they conducted themselves both in and out of the ranks.

GEO. L. CLARK,
Business Manager.

To military readers such praise as the foregoing could hardly be higher. Coming from the organ of the united services, with its comparisons with the famous 7th Regiment, what more could be asked?

To-day the Academy is able and ready to do as good work as in the past. The superintendent is admirably assisted by an efficient staff. Treasurer and Business Manager George L. Clark has been in the school continuously since 1867, except a few years when he served as steward at the Insane Hospital, and much of the financial success of the school must be ascribed to him. Selwyn B. Clark since 1880 has been Commandant and Drillmaster, and the other departments are in equally efficient hands. That the same men have so long retained their respective positions argues strongly for their usefulness. The Highland Military Academy is one of the most valuable of the many educational institutions of the city of Worcester.

Municipal Reform.

By "Lincoln."

AS John Adams discovered, in the undercurrent of feeling among the yeomen of Worcester, that sentiment which afterwards blossomed into the Declaration of Independence, so may one now see signs of a revolution in the organization of our municipal government from the undercurrent of dissatisfaction with the present condition of affairs.

One need but to open the subject in any quarter to bring out the fact that there is a very general condemnation of the politics which control the selection, and the action, of the members of the City Council.

Even among past and present members it is not difficult to find those who utterly condemn present methods.

That nothing is done to remedy the evils is due to the lack of some feasible plan which promises an improvement.

It is recognized that when a change is made, it should be along lines radically different from those which have resulted in the present unsatisfactory condition; no tinkering patchwork, no half-way measures will be at all adequate to bring about the necessary degree of reform. The seat of government has been transferred from the people themselves to those who make it their business to be in politics, and the first thing to be done is to bring it nearer home to the people for whom it exists. It has been made difficult for men of capacity, for men who are busily engaged in prosecuting the industries of our great city, to accept public position and give the benefit of their ripened judgment to that largest business establishment which is expending more than $1,500,000 each year. So the need is to so arrange our methods as to make it possible to receive the advantage of judgments ripened by experience.

At heart the great bulk of the people are right; they desire honest, fair, honorable, able conduct of their affairs. If they are misled at times, if they allow prejudice to control them under bad advisers, if the truth is concealed by designing parties, it can be only for the time being, and, if they are provided a way, they will correct all such mistakes, and no machinery, no set of politicians, can keep them from so doing.

As an indisputable premise, it is claimed that never since the world began has there been a more perfect scheme for a "government of the people, by the people, and for the people" than was found in the New England town-meeting. Not that it was a perfect government, for that is unattainable with imperfect agents, but that it, in the most practical way, brought home to the people themselves a realizing sense of their responsibilities; an appreciation of the problems that underlie self-government; afforded a ready means of getting at and correcting errors and abuses; and, what is more important, secured men of the largest understandings to shape the policy of the towns.

Applying the foregoing considerations to our present situation, the following solution is offered as a tentative proposition, which discussion may develop, improve, show the imperfections, bring out the advantages, and possibly mould into a working method that will commend itself to the intelligent judgments of those who have the best interests of the city at heart.

The city shall be divided into suitable precincts, after the present arrangement, the voters of which, without respect to party, shall meet in mass meeting, say in December of each year, to elect one of themselves to represent them in a consolidated town-meeting body made up of one member from each precinct, to be known as the City Council; and

to express their opinion upon any debated question of public policy.

This City Council, so composed, being in reality a consolidated representation of all sections of the city, to meet early in the year, elect, from outside their membership, a citizen to serve as Mayor for the year; a board of public works; a school board; a parks commission; a license board, and such agents as required by the State laws; to fix the appropriations and decide the policy of the city along the various lines of its activities. These matters accomplished, which may take but few meetings and a minimum of time, they would adjourn until such time as some emergency should demand their reassembling, or until the close of the year, to receive and act upon the reports of the Mayor and the several boards.

The Mayor, thus selected, to be the official head of the city, its dignified representative upon all needful occasions, the executor of the laws, charged with the duty of seeing that the policy, as determined by the Council, is carried out.

The Board of Public Works to consist of three members, one to be selected each year, with the understanding that they shall be reëlected so long as they satisfactorily perform their duties; to have charge of all the business affairs of the city not specially committed to others; carrying out the policy determined upon by the Council; appointing all necessary heads of departments and agents for the performance of the work, being responsible and fixing the compensation for same. Full reports of their doings to be submitted to the Council at the end of the year, or at any time called for by same. Each member to receive suitable compensation for and devote all of his time to the business of the city.

The School Board to consist of three members, to have full charge of the educational department of the city, appoint all necessary subordinates and be responsible therefor, carry out the policy determined upon by the Council, and report to same at the close of the year.

The Parks Commission to have entire charge of the parks and pleasure-grounds of the people, together with all provisions of public enjoyment, as directed by the Council, reporting in full at the close of the year.

A License, or Police, Board to have full charge of all matters relative to the suppression of crime and the regulating of undesirable trades and occupations; appointing such officers and agents as shall be necessary, being responsible for the doings thereof, reporting in full at the close of the year.

Under this plan, roughly outlined, would it not be possible to secure more ability in the management of our municipal affairs; take the Council, aside from the necessity of each precinct sending its strongest man to secure its proper influence in the consolidated body, to which end the various factions would have to vie in order to get their man elected, would not the limiting of the duties to the simple one of demanding from them the exercise of their best judgment in deciding the policy of the city, induce our best brains, and busiest men, to accept such a place of service to the community which under present conditions he cannot afford to give?

Limiting the duties of the Mayor to those named, it would be possible to secure worthy successors to Levi Lincoln and the early worthies who would never have stooped to the character of the detail now imposed upon our executive, in consequence of which we are unable to obtain the services of men who in their private capacity have no need to waste time on petty details that they are able to have performed for them. Further than this, would he not escape that newspaper criticism that is so obnoxious to some, and however much people might differ as to the policy to be pursued, there would be no use in besmirching the representative head of the city when he was not responsible therefor; would not the blame be directed to the action of the precincts and the battle be fought out there in the succeeding election of representatives to the centralized body?

By making the boards responsible for the management of their departments, will we not secure a more business-like conduct of our affairs? more care in the selection of trained experience in

carrying on the work? more honest application to the business in hand than under the present system? where heads of departments do not dare to move or speak for fear of losing their positions through some disgruntled politician, or the assaults of an interested press. Would it not reduce the chance of bribery or corruption, both from the character of the men that would naturally be selected for these boards, and from the fact that they could not afford to tolerate dishonesty or incompetency, any more than the managers of business establishments could?

In a word we divorce the business from the political end of the organization to the purifying of both.

Politics ought to have to do with the determination of the policy to be pursued by the city, and nothing else; this is secured by the precinct (town) meetings, which elect that man who is best in accord with, and best able to support, their sentiment, with the added privilege of expressing their opinion upon the question at issue. The Mayor as the dignified representative of the city and the executive of the laws need lose no prestige, or dignity, by entering into details of either politics or business. The various boards having no other duty but to carry out in the best possible manner the policy decided upon by the Council, and being responsible for their appointees, would have no need to consider the political aspects in the discharge of their duties, and the employees would have no temptation to make themselves solid with this or that Common Councilman in order to be semi-independent of his immediate superior, but all would look for their continued employment to the board whose sole object it would be to secure the most efficient performance of the work determined upon.

Is it not worth considering, not perhaps as a perfect measure, but as one that will tend to the divorcing politics from business and to the bettering of our municipal government?

Pressure in the Public Schools.

A Smoke-talk before the Worcester Board of Trade by E. Harlow Russell, Principal Worcester State Normal School.

I DESPAIR of being able to present to you within a reasonable time the results of a good many years of experience and observation, and I shall, necessarily, from the informal character of my talk, which I was given to understand would be more acceptable than a formal address, include some things which should be omitted, and omit much that might well be included, because the subject itself, the pressure that I am going to bring to your attention this evening, is one of the most manifold and varied things possible. They tell us, you know, that the atmosphere, the air that surrounds us, presses in all directions at the rate of fifteen pounds per square inch, but we never can realize it, however much we may try, because we may very easily seem to contradict it and show that it does not press at all, under ordinary conditions. That is very much the case with the pressure in the public schools. It presses from all sides and in all directions, and thereby becomes, to a great extent, imperceptible to ordinary observation. And so what I say this evening will have to be somewhat prolix and somewhat rambling, and, as I said, I shall leave very much unsaid.

I assume, to start with, by my very title that pressure exists, and I shall endeavor to show you certain sources from which it comes and certain ways in which it is seen and felt; and the first point that I wish to bring to your at-

tention is the pressure that comes from the subjects taught and studied in our schools. First of all, the number of them: the mere number has been multiplying, increasing, constantly, since my earliest remembrance, and never diminishing. Almost nothing that was taught forty or fifty years ago in our schools has been dropped; almost everything that any of us ever studied in the district school in the country is studied to-day, and in addition to that a great deal more that we never studied in our boyhood. Forty years ago we had, you know, reading, writing, spelling, arithmetic, geography, grammar, not for all pupils, but for some, in many cases for most, but not for all; history, for a few; sometimes there was a class in history and sometimes not. But that about exhausted the list. And not only the small number of studies, but the simpler ways in which they were pursued and taught, then! The form and method of instruction was far simpler, far less exacting. We had very few examinations, and these were usually public examinations, when it was largely a matter of luck how you got through, and you were not held to much account, after sun-down, for the results of these examinations. There was no publication; no record; no marks; no scale; very few reviews that were rigorous or exacting; and that covered the ground. Text-books were used in almost all subjects, and lessons were assigned in a perfectly definite way; and Memory (which is the mother of the Muses, you know) was chiefly called upon, and the pressure upon the memory is very largely a mechanical pressure, so there was almost no pressure upon the intellectual faculties. That state of things is what some of us remember. To-day we have everything that we had then; but in the matter of reading! The reading done in the school is supposed to be but a very small part of the reading which the child has to do. Supplementary reading, not only in school, but at home, is the rule, not the exception, and this reading covers a very wide range. It covers a wider range from the first to the ninth grade than most of us who are here ever covered in our lives, old or young. Very few of us, gentlemen, have ever gone over the list of reading that is recommended for the pupils in the grades of our schools to-day. Teachers' bibliographies and lists I have sent to me from all sides; I received one from Wisconsin to-day; the lists themselves are a matter of pride to the makers, and the man who gets out a larger list than has been issued before takes some credit to himself. This in addition to what is done in the schools; and, moreover, reading is not the recreation nowadays that it used to be. There is a reckoning-day after your reading! You can not read even the most desultory book without some examination looming up, or some composition being required of you afterwards to tie a knot in the thread! So that our children read more or less under a sense of responsibility, and some of them who are conscientious rivet their attention on what they read, and talk it over and repeat it over—sometimes in their troubled sleep. I can not dwell upon these particulars; I wish I could.

As to the writing that was done years ago compared with what is done now, there is no comparison whatever. We wrote very little. It was considered rather peculiar for a teacher to require the pupils to write compositions at all, and once in two weeks was regarded as often enough for that exercise. Writing now goes on daily and hourly. Not the "compositions" we could write on "Spring," or "Friendship," or "The Seasons," but we have to write, now, to a line, to a mark, with a sense of responsibility; something that can be tested, that can be marked, something that we can show the foundation of. We have to be responsible, now, as pupils, for the accuracy of what we write as well as for the punctuation. The matter of punctuation alone in connection with writing is a tremendous burden. Perhaps some of you remember the story of Mr. Lincoln, when he was President. His private secretary had, in some way or other, called his attention to the use of the semi-colon, and he had looked into it a little, and he said, "I have always used the dash, a short one for a short pause, and a long one for a long pause, and for a full stop a very long dash. But

I see this semi-colon is a pretty handy little fellow to use." He felt proud in his maturity and manhood that he had become acquainted with the semi-colon. And some of us are a little particular about using it, but our children and grandchildren are held to responsibility from the very first grade, and it is kept up as long as they stay in school, all these things being added and none of them dropped. That is the chorus, and I shall ask you to come in on the chorus if this tallies with your own experience. Daily written work! Daily written work! That is the only way, they say nowadays, that you can learn to write. Examinations, written examinations, written reviews, compositions—not compositions at random, but compositions focused with a convergent attention to a particular thing that must be studied. This is wholesome; every single one of these things is good in itself, but there are too many of them! That is my contention. They are too simultaneous, too numerous, and too urgent. In arithmetic, fractions are begun in the first grade, when the children are five years old. Most of us did not begin them quite so early. The thing is beveled down, and the beginning is made easy and the pupils are induced to enlist early, and when they are once enrolled they discover pretty soon that there is no escape but in desertion, which is a criminal affair. Everything is arranged with skill, with art, with careful attention and a systematic connection, a logical relation to other things; gradation is carried to the finest point possible, but it does not relieve us of the strain. It does not relieve us from the pressure; it increases it, rather, for children can work in a miscellaneous way with far less nervous strain than they can work in a perfectly systematic and logical way. We learn, sometimes, in our maturity, how to acquire things in logical order and connection, but it is a late acquirement. We did not learn it when we were children. We got it in a more haphazard way. That is not tolerated now. Now, the mere pressure of all these things is a pressure, and a very strong pressure, upon the child's mind. Algebra, geometry, mensuration, and all this with accurate explanation and reasoning. Dr. Thomas Hill, former President of Harvard, a man of great experience, in his time deplored the fact that we teach the reasoning of mathematics to our children before they are capable of learning reasoning as a mental process, native to them; but that they have simply to learn by heart the terms by which we express reasoning. You can teach the parrot to say "hence," and "therefore," if you try long enough, but you can not teach the parrot the meaning of it. The child will say it right about four times out of five, but never five times out of five, because he is not ripe for reasoning; and yet we force it upon him almost upon the threshold of the school-room, and we think we have made it easy for him when we have explained the different orders of units, and about borrowing ten—all of that kind of thing. The most elaborate and accurate methods of explanation are adopted, and they are put upon the pupils long before the pupils can understand them, and that is what Dr. Hill deplored: "When I was a boy, we used to be taught *cipheering*, not mathematics. Now the attempt is made to teach us mathematics, and we not only don't learn that, but we don't learn how to cipher." Ciphering, as all of us understand, is a mechanical operation and to attempt to teach the underlying principles properly is not to do the child a service, but it is to call upon him to exercise faculties which are not yet ripe for exercise. I will not dwell on that. I remember, however, some years ago in a teachers' convention, a person who was to talk on arithmetic asking if there had been anything left for him by express; and he paced the floor very uneasily indeed until it came. It seemed that he could not go on with his paper until that box arrived. Then he opened it, and there were great varieties of little objects for the teaching of arithmetic, a great many appliances, and he went on to show how these were to be used, taking up almost all his time showing how these little appliances were to be used with the pupils; and Mr. Jackson, now master of the English High School, who happened to be seated beside me, whispered in my ear, "You and I never saw

any of those things, but we got there just the same."

You can teach the technique of illustration; you can teach illustration as an art in itself; you can teach illustration until the illustration and the technique connected with it vastly overtops the thing illustrated, and when you have done that you have brought an undue and unnecessary pressure upon the mind.

Take geography—the simple geography we used to study! How we used to bound the states, tell their capitals, chief rivers, etc. We could do this glibly, and then we were dismissed. But now we have physical geography, which expands into what is called physiography, a sheaf of natural sciences which brings in chemistry, meteorology, geology, and many other things, physics particularly. We have physical geography, which is regarded by many as a very essential part of geography. We have astronomical geography, in which the position of the earth as one of the planets in the solar system and the position of the solar system itself are all explained and worked out. We have commercial geography. I had sent to me, yesterday, a book of 400 or 500 pages on the subject of commercial geography. It is important to show the trade of the world. It is in itself very important, and yet it is another subject, and it is, to some extent, a subject which requires an expert to fathom, and understand, and handle and use. We feel that we should be better off to have almost anything that a human being can learn, but should we be better off to learn *everything* that all human beings can learn? That is my point, and that is what we are tending to. We can not learn everything. That is the trouble. We attempt not only anything, but everything, and the brain has not shown any corresponding expansion. Our heads are about the same size that they were forty years ago. Now think how very much more extensive and exacting geography is as it is now taught; how much of a specialty it has become; how many men are devoted to it almost exclusively, and to the writing of texts and arranging of courses and lectures and illustrations of all kinds.

In grammar we have developed wonderfully in the direction of analysis. Some of you remember how hard it was for us to digest analysis when it first came to the schools under that name. Grammar we could understand; but this analysis was something new. Well, now, the analysis that we were taught then is a very simple matter. It is mastered after a fashion very much earlier than formerly. I can not dwell on these topics, but without dwelling on them I am conscious that I do not give you an adequate notion of the minutiae and the way our school curriculum has expanded.

Take the subject of history, which was good reasonable study of reasonable compass and of some interest, some time ago, but which has now been developed wonderfully, not only in the extent of it, for a good deal of history has been made in forty years, so that the student has now to take not only all the history we took, or could take, but all the history which has occurred since, and the text-books and teachers are hot after the very last event, and must get it onto the blackboard and bulletin the very next morning if possible. The maps of the new possessions were about and in the schools before the guns ceased firing. There is this eager, this ardent, this hot, pursuit of every bit of history; and, moreover, here is civics, as it is called — the theory of government—that has to be explained. The machinery of government is an extremely complicated and abstract thing. The relation of the local government to the county, and of the county to the state, and all that, and all this must be taught. Then, lately, we have got to making a great deal of cause and effect. If a pupil dares to say that the Battle of Bunker Hill was fought on the 17th of June, he is immediately asked to halt, and stand and deliver, and asked for reasons for that. What preceded it, and what precipitated it? And what the result? What happened in July? He must give the things that led up to and flowed from the event. Admirable for mature minds, if there were time and strength for all

these things. In itself each one of these things is as innocent as a lily, but in the aggregate it is something prodigious. I have been studying it for the last forty years, and I can tell you that it is overwhelming, from my own standpoint, notwithstanding I have been dabbling in it in many ways. Then there is what is called patriotism. Don't you know what an agitation there has been? It is extremely vague, it has not amounted to very much more than running up flags, and singing, but there is a certain feeling that patriotism must be taught. Find out some way or other of holding the child up, as it were, on a fork, and teach him patriotism, and do it quick! Now, I don't know any very sure way of teaching patriotism, myself, within a short time. I should not like any of you to hold a watch on me while I taught your children patriotism.

Well, then, we have physics, and we have chemistry, and we have physiology, and we have nature-study, and in physiology we must teach, according to law, what no physician present knows, namely, the precise effects of alcohol in small and large doses upon every organ and tissue of the body. That is one thing we must do. Those who know nothing about it must teach others, and must teach them according to directions. Now this could never have existed, no such demand ever made or law ever passed, if the community had realized the condition of our schools as to this matter, but we go upon the false principle that anything that can be taught can be learned. Teaching is one thing, and learning is a very different thing. One man can lead a horse to water, but ten men can not make him drink. We take it for granted that what has been taught so logically, so adapted to the various grades of schools (telling you just when to read a certain thing, the year, day and hour when to read a certain book), must be learned thoroughly. Now that is all visionary. You can't tell when you should read a particular book. It can not be made so fine as that. My friends, we delude ourselves. We deal in specifics all the time. We know nothing at all about constitutional treatment, but we can give you a sure cure for almost everything, and it is a little bit of a thing, done up in a small package and can be administered by anybody. That is the doctrine, and when you have once been through a—normal school, say, it is tremendous. I should like to read you a page from a certain course of study, and this course of study can be in one place or another; it is the same everywhere, in all our cities. I thought you might perhaps like to know what it would be well to teach a child in the ninth grade. A child in the ninth grade is supposed to be about fourteen years old. Now, if you will go back to the time when you were fourteen and just reckon with yourself a moment, you will see how much less you knew of natural philosophy, of physics, than people do now: matter, visible and invisible, the three states; molecules, atoms; gravitation, the plumb-line, the balance, centre of gravity, weight, specific gravity; pressure of liquids, artesian wells, city water-works, suction-pump; pressure of gases, barometer, air-pump, balloon; properties of matter; solution of solids, diffusion of liquids; force, inertia, motion, energy; first law of motion, friction; second law of motion, accelerated motion, falling bodies, pendulum; third law of motion, momentum; work, unit of work, horse-power; machines, law of machines, lever-wheel and axle, pulley, inclined plane, wedge, screw; heat, its sources, mechanical action, chemical action—including combustion—the sun; temperature, the thermometer; conduction, convection, air-currents, ventilation, ocean-currents; expansion of solids, liquids, gases, by heat; evaporation, distillation; artificial cold; the steam-engine, other applications of steam (we don't stop with the engine); light, the ether, undulatory theory, direction of rays; transparent, translucent and opaque bodies, luminous and illuminated objects, shadows, velocity of light; reflection, mirrors, refraction; optical prism, analysis of white light, color; lenses, microscope, telescope, spectacles; sound, vibration, sound-waves, velocity, reflection, refraction, echo, speaking-tubes; pitch, vibration of strings, telephone; frictional electricity, attraction and repulsion, light-

L. of C.

ning; current electricity, cells, batteries (this is not the Polytechnic Institute, this is the ninth grade!); magnets and magnetism, the mariner's compass; applications of electricity.

That is a specimen of what I could give you by the yard, in the courses of study prescribed in nearly all the ambitious cities who want to be up with the band, in the northern states, and the worst of it is, there is some attempt made actually to teach some of these things—some of the most abstract, most complex, most unusual things that you can possibly name. No physician could go into our schools and give a series of talks from his professional list of topics, no physician could give a list of topics much farther removed from the ordinary intelligence of the community. Things that not one grown person in a thousand knows anything about, children must all be taught, and taught early when they can be easily caught.

Now, nature-study. I could read you a volume on that subject alone. It is like a kernel of corn that has been heated and popped. It is most interesting and improving, and all that, and will make you regret that you did not have it. IT is all right. Any one of the ITS is harmless, but it is the THEM! You remember the discontented pendulum: it was not the sixth, nor the sixtieth, but the millions of oscillations. But what if those strokes had been simultaneous?

Then we have drawing, and you know how much we insist on accuracy there. We have music, and you know how much practice and how strictly you have to be held to the mark. Now if you had to be held that way daily, year after year, and that at an age when you had almost no interest in music, only in noise, it would be something of a task. And all this work besides home work in great quantity, and Sloyd, manual training, and all that.

In a certain normal school an exhibition was held a week or two ago, of three sorts: School Exhibits—

COMMON BRANCHES.

Penmanship. Arithmetic. Language.
Geography. History. Drawing.
Clay-modeling. Text-book in Reading.

INDUSTRIAL WORK.

Sewing. Weaving.
Braiding. Basketry. Hammock-making.
Woodwork. Cardboard-work.
Mounted Seaweeds.

HOME EXHIBITS.

Cooking. Needlework. Knitting.
Washing. Ironing.
Bed-making. Whittling. Carpenter-work.
Sail-making. Netting.

These are some of the things that students have to give their attention to; not all of them simultaneously. The worst of it is in the mere number, and in the exactness and method which are insisted upon. It is the way in which all work is tested; all work is marked, estimated, as to its merit. There is where the pressure comes, largely.

This vast expansion of science which has taken place, in art and industry, has made most of the subjects, formerly simple, extremely complex, so that to study the relations and particulars of subjects is no mean task for the best of us, and yet we do it, many of us, only as a preparation for what we are about to do with the children. The teachers, whose minds are comparatively mature, burn the midnight electricity in order that they may not fail next day in the accuracy, complexity and scope of their lessons. What they find hard and exacting they arrange to teach their scholars, and teachers who stop teaching very largely stop this urgent work of preparation because it is evident that it is raised to too great a height. They enjoy the freedom from it. They only keep it up in order to have something to work upon with the children. That leads us, of course, to think of the children. The methods of study are very different from what they were thirty or forty years ago. They are more experimental and inductive. This is time-consuming. Students are put to find out things by themselves. If time enough is given, it is all right, but if this prevails as a method it is terribly time-consuming. The old-fashioned, dogmatic way was very different. The old master, in explaining the rule of three, or what we call proportion, explained it somewhat in this way: "Now, in such a case as this, more requires

more and less requires less; but in the opposite class of cases, more requires less and less requires more. Do you see that?" The boy didn't see it, and then he repeated it, louder and nearer to him, and, finally, as the boy still held out a little on account of the obscurity of the terms, he took hold of his ear for the sake of reaching him through another sense. And the boy thought that if more required more he would give in!

You can not teach inductively, by the gathering of a large number of instances and drawing a conclusion, without a great deal of hard, executive work and occupying a vast amount of time. All these methods are terribly time-consuming. Bear this in mind, because the inductive method is so good that we are apt to forget how much we pay for it. The old-fashioned way was not so ideal, but it was far more expeditious, and, for a certain class of minds just as effective.

Another thing is the *reading up*. I spoke of the enormous amount of reading, but this is not a circumstance compared to the "reading up." Reading up is the thing, and the teacher who is up to date is continually exhorting her pupils to "read up" a subject, and a long list of books is given, and if the teacher is not posted the pupil is sent to the Public Library and there is shown a great number of books. Now this is admirable, considered by itself indispensable, almost; but have we got the time, the strength? That is the point, and have the children got the nerve tissue to stand it? I can not answer it. I came here to raise the question, not to answer it. Another thing is the matter of testing. We can not let the thing go. When we have taught a thing we have got to turn around and it has got to be given back. We have got to give some sort of an emetic, and if it operates promptly and the thing is very much in the shape in which it was swallowed, then it is accepted! "Now we must have a test. I shall ask you about this to-morrow." So the pupil goes home dreading this operation that he knows is to come next day. He knows he must be examined; must write reviews. And then the thing that he produces, if it is anything that can be shown, must be *exhibited* in some way or other. Now this matter of reviewing, examining, exhibiting, is a thing which may very easily be carried to excess, because exhibitions, as you know, in any direction require an enormous amount of time and care, and they sometimes cost more than they are worth. And especially is this the case where little children are set to produce things beautiful to look upon, exact, perfect, well finished, spending any amount of time over them and then exhibiting them. The child has spent ever so much more time in finish than the thing is worth when finished. It is not the high finish, it is not the exhibition finish that pupils ought to be required to give. There is a kind of exhibition of *finish*. I remember the case of a little girl whose confidence in the teacher she had almost worshipped was dashed and destroyed at one crash; when, in preparation for the Centennial Exhibition at Philadelphia, a drawing which the little child had made, and signed, and worked over, no end, was not quite as nice as the teacher thought she could make it. So she took it home and finished it up herself, and sent it in with the little child's name upon it! The child received a lesson in dishonesty, and such things are not so uncommon as we wish they were. The exhibition spirit is not so good a spirit to get into a school, especially with the young children.

(*To be continued.*)

BOOK OF THE ROYAL BLUE, the entertaining monthly magazine of the Baltimore & Ohio Railroad, has as the leading feature of the August number "Gettysburg." The great battle is the subject of an interesting sketch by Gen. H. S. Huidekoper, of Philadelphia, accompanied by his topographical map and many recent views of such prominent places on the field as "Devil's Den," "The Angle," "High Water-mark," "Clump of Trees," "Peach Orchard," etc. The story of the great three-days' fight is followed up by a description of the odd monuments on the field, and why they were erected. Every veteran, whether "Fed" or "Reb," should see and read the Royal Blue.

Miss Carrie A. George, Teacher.

AFTER more than forty years of continuous teaching in the public schools of Worcester, Miss George departed this life Tuesday, June 24, 1902. Though thus long employed, there are still in our city's service three teachers whose names were borne on the rolls before her coming, and long as their services have been, we have the records of women who toiled with and for young Worcester even longer periods. The continued years of "Ma'am" Pratt [Abigail] are often mentioned by middle-aged people, while Sarah W. Clements, who died June 20, 1892, had taught from May, 1834, to December, 1891, or more than fifty-seven years. So appreciative were the members of the School Committee, they even drew up a very flattering inscription, which the City Council was requested to have placed in tablet form upon the walls of the Sycamore-street school-house, where she had officiated for so many years. The proverbial slowness of large bodies is evident in the fact that the tablet yet awaits its placing.

Caroline Apphia George was born in the town of Antrim, Hillsboro County, New Hampshire, but when she was very young her parents removed to Hillsboro in the same county, where her earlier years were spent. Though a native of the Granite State, her parentage was wholly of Massachusetts origin, her father, Aaron, being a descendant from Huguenot ancestry, settling in Newburyport in 1633. Her mother, Mary N. Moody, born in Landaff, was of another old Essex County family which had emigrated from Wales in 1635. While never boastful of family affairs, our teacher had reason for some pride in the fact that her grandfather, Benjamin Moody, enlisted from Haverhill in the War of the Revolution at the early age of fifteen. He was in Captain Poor's company, served through the war, was twice wounded, and was among the devoted men who, with Washington, crossed the Delaware to capture Trenton. Her father was a manufacturer and a worthy citizen, but her aptitude for teaching doubtless came from her mother, who was a natural student, and succeeded admirably as a teacher. The mother had the advantages of Bath Academy, and when her brother entered Dartmouth she could have passed the examination with him. She was at one time preceptress of Francistown Academy, and all her life was a model in the use of the English tongue, whose chief apostle she ever insisted was Lindlay Murray.

Miss George as a girl gained what the schools of Hillsboro had to give, and then took a thorough course in Nashua at the Academy of Mr. David Crosby. Before this, however, she had begun her successful career as a teacher, for when only fourteen years old, still a girl in short dresses, her merit was recognized, and a gentleman from the neighboring town of Stoddard secured her for his district school, and so well did she acquit herself that she taught there again the next season. She was always an apt student in mathematics, and, even as a girl, settled many a dispute among her neighbors over land boundaries.

She always rated her teaching as really beginning in Nashua, for it was while a pupil with Mr. Crosby he suggested to her that she take a position then offered in the High School of that city. She thus became the assistant to Principal M. C. Stebbins in the old edifice, and the next year, in the new building, she was made principal of the grammar school department. After a stay of two or three years in this position, she had an unsolicited offer to teach in Concord, and accepting the proffer she was in New Hampshire's capital about five years. Her coming to Worcester was during the superintendency of the Rev.

J. D. E. Jones, and was brought about thus: A Boston school-book man by the name of Wild had called upon her in her work, and recognizing her merit mentioned her as a proper successor to Miss Eliza A. Brigham, who resigned in 1860. Accordingly, she came to Worcester, took the examinations, and then returned to Concord to complete her school year there. Her name appears first in the report for the year 1860 as a teacher in the Sycamore-street school, and in this school she remained through 1872, when she was transferred to Dix Street, where she continued only two years. In January, 1875, she went to South Worcester school, and there we find her each year up to and including that of her death.

In the language of the report, she came here as principal of the third department of the Sycamore Street school; evidently this was before the days of grades as at present understood. The principal of the school, Mr. Addison A. Hunt, was, in his day, one of the educational notables of Worcester, for in addition to his teaching an excellent school he had the strength to ride to and from the town of Barre each school day, and this meant then every day in the week save Sunday, and it was before the advent of the B., B. & G. R. R., hence he had to *drive* to and from this city, a total distance of thirty-six miles, an exaction of energy that seems hardly credible. In 1865 she was advanced one degree and was next to the principal, and so continued till her transfer to Dix Street, where in the graded arrangement she was assigned to Grade VIII, having for principal Mr. Hunt, with whom she had begun her Worcester career more than twelve years before. On going, in 1875, to the Cambridge-street school, then known as South Worcester, she took charge of the building and the eighth grade, which was the highest

MISS CARRIE A. GEORGE.

taught there, except for a single year, 1882, when, on account of the crowded condition of the near-by ninth grades, one was organized under her.

So, then, for nearly thirty years her name has been associated with the school in this part of Worcester. At first called South Worcester, it has been known as the Cambridge-street school since 1892. How much her life and example have told upon those committed to her charge, we shall never know, but of this we are certain, that there are hundreds who are ready to arise and speak her praises. She loved her work and her pupils, and in return they loved her. When she was nearing the crossing of the river, there came from a city in the far West, beyond the turbid Missouri, a message from a young man professing another religious faith than that which his teacher had held, but in the depth and sincerity of his devotion, he said he had had a special mass offered for her recovery. Nothing during her illness gave her greater comfort, and the loving letter was carefully placed among her papers. Worcester people are well aware that the school-house in which Miss George taught so long is located in a part of the city where it is claimed that some of the laws of mine and thine are not observed with the utmost exactness, but the teacher of the boys and girls who gathered under her care ever prompted them to regard strictly the rights of others. When Mr. M. J. Whittall erected his elegant mansion on the corner of Cambridge Street and Southbridge, he was told that he would have to inclose his premises with an insurmountable fence, but he had more confidence in his fellow mortals and in the teachers of the city; nor has the sequel belied his trust, for his property, free and as open as the day, has been uniformly respected. With a full realization of the humanizing effect of the beautiful, she suggested to the generous proprietor that once a year the school be permitted to walk through his grounds, a request he was only too willing to grant, and this circuit of Mr. Whittall's premises was the one day of all most cherished by the lads and lassies who followed the principal. She had perfect faith that her children would not molest the property of the owner, nor did they, and the sight of flowers, fruit and foliage did much towards elevating all beholders to a higher plane of living. The annual procession of 700 children, led by their devoted and trusted teacher, was more worthy of a Chaucer's talent than any which ever journeyed towards Canterbury; and their conversation was vastly more profitable than any recorded in that "well of English undefyled." No school-yard in Worcester is better kept than that which separates the Cambridge-street edifice from the thoroughfare. Built long before modern notions of architecture had obtained, under her care and direction its bare surroundings have been made to smile with verdure and blossoms, a tribute no less to the teacher who prompted than to the little folks who lovingly seconded her efforts. Adjoining the Whittall estate on the east, the observer makes no belittling comparison as he notes, side by side, private and public properties equally well kept. It is not a distant prospect of Eton College that salutes the eye, turned towards yonder southern hillside, but rather one of Holy Cross College, up to which many of Miss George's boys cast aspiring glances, cherishing ambitions which she was wont to foster and further. Her interest in her pupils did not end with their school days, but followed them into active business life, and many grateful letters, preserved among her papers, attest her helpfulness in securing situations for those whom she had led.

The Worcester home life of Miss George was with her sister, Mrs. Charles W. Flint, who had followed Miss Carrie A. to this city as a teacher. Their parents had removed from New Hampshire to North Chelmsford in this State. A sister had died in girlhood, and their only brother, William M., had died suddenly in April, 1855, while a student in Vermont's Norwich University. While always fond of society, the demands of her school prevented that participation which was hers in Nashua and Concord, but she had a cheerful voice and a warm hand for all her many friends. After assuming her Worcester duties, she took no long vacations. Once only she had

the pleasure of a trip to Europe, devoting to it her summer interim, and on the return, unable to secure a ticket in time for the September opening, she was forced to be three weeks late, an offense which the school authorities were much more ready to forgive than she was herself. At another time she yielded to illness for a week, and thus did not see her school for that time.

She had a measure of determination which must have come down to her from that Revolutionary grandfather who had braved the broken ice of the Delaware along with Washington, for though conscious of weakness and suffering from pain, she would not yield, but held her place till the Friday before Christmas of 1901. Then she returned to her home positively ill, and so far yielded to the advice of her physician and friends as to consent to go to the City Hospital, where she remained two weeks. Having rallied somewhat, she came back to her home, and two weeks later, against the wishes of those nearest her, again resumed her post, but at the end of two weeks of work, she sent for a member of the committee, who advised her to ask for a leave of absence. On the evening of that day the School Committee voted her a vacation with a full salary, a boon seldom granted.

There followed several months of growing weakness, yet she held on so bravely to life that she looked up southern resorts and time-tables with a view to trying the effect of change in air and surroundings, but at no time did she feel able to make the start. Her descent of the declivity was very gradual. She rode out frequently till within a month of her departure, and on the day of her death she sat at the table with the family. Thus reluctantly did she go away from those who loved her. Saturday, June 28, at ten a.m., a private funeral was held at her late residence, No. 4 West Street, at which the Rev. Frank L. Phalen of the Second Unitarian Church officiated. The bearers were her former associates in the Worcester schools, viz., Principals J. C. Lyford, W. H. Bartlett, Joseph Jackson, F. P. McKeon, John E. Lynch and E. E. Thompson. The remains were taken for burial to North Chelmsford.

CAMBRIDGE STREET SCHOOL-HOUSE.

Now that we have only the past to consider, we begin to realize the devotion which prompted her to work when rest perhaps had been better, but she thought not, and so worked on, preserving her accustomed cheerfulness to the end. Had she read Charles Kingsley and so tried to make of "life death, and that vast forever one grand, sweet song"?

At the July meeting of the School Committee, the superintendent read the following abstract of Miss George's characteristics, the same having been

prepared by a former pupil, Principal Francis P. McKeon of the Millbury-street school:

"Miss George loved her calling, and was unwearying in pursuit of it. Without stint of time or labor, she dedicated to her daily task of teaching all the physical energies, all the mental powers, all the moral resources of her being. With her no details of her work were too insignificant or too exacting, nor did she suffer their monotonous nature or their growing complexity either to dampen her ardor or to chill her unflagging spirit. Hers was the courage that could have died at its post accoutred for duty, and she would have preferred, had she a choice, to rest her head upon her school-room desk for her last sleep rather than upon a pillow of soft down.

"Bravely she faced her last long illness, buoyed up not indeed so much with the hope as with the belief that she was soon again to return to the place that now must know her no more.

"In all relations with her teachers and fellow principals, she stood firm for what she thought was best for her school, but she did not forget the little amenities that spring from kindly consideration for the different view-points of others.

"To the parents whose good fortune it was to have their children in her care, she was a tower of strength in helping them to correct the faults and strengthen the virtues of youthful character; and to many, many scores of pupils—now men and women — whose last, highest and best school training was received at her hands, she will ever be the type and ideal of a good teacher and a noble woman. She taught in the schools of this city for forty years, and ruled as principal at Cambridge Street for twenty-eight years; and it is in every way fitting that at least this brief estimate of her work and worth should be inscribed to her memory in the records of the School Committee of the city of Worcester."

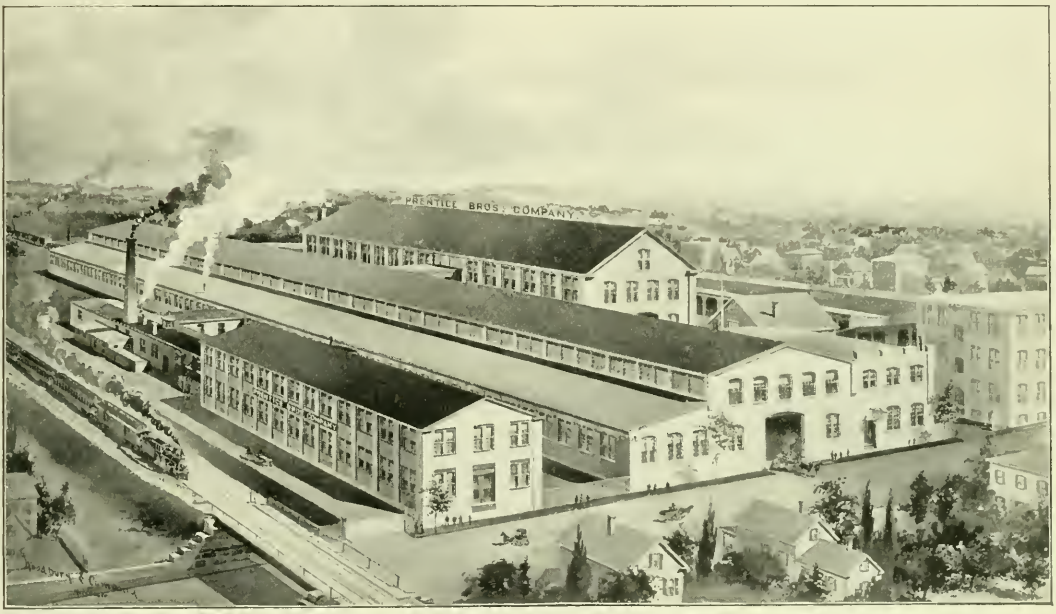
THE FOUR TRACK NEWS for August certainly offers the reading public a most delightful assortment of entertaining and instructive reading matter, together with a wealth of charming pictures—and all for five cents. The leading articles are "The Gem Lake of America," a delightful description of Lake George, by Eugene J. Hall; "In the Wisconsin Dells," a word picture of the "Watkins Glen of the West," by Henry Howard Forest; "The Floral Mardi Gras," a sketch descriptive of the Saratoga floral fete, by James Arthur Seavey; "Under Mexican Skies," a poetic article descriptive of dreamy Mexico, by Marin B. Fenwick; "A Journey Among the Stars," a fascinating article embodying an account of Dr. William R. Brooks' cometary discoveries, by Frank W. Mack; "Four Points of View," or four different ways in which different men viewed the Hudson River, by John K. Le Baron, setting forth the advantages and pleasures afforded by the New York Central & Hudson River Railroad, Grand Central Station, New York city.

SUNSET. Most appropriately named, published in San Francisco, representing the Southern Pacific R. R. This interesting magazine comes from the Pacific coast, filled with matter entertaining to dwellers in all parts of the continent. The recent death of Bret Harte, suggests an article, or several of them, on that remarkable man, whose star reversed Bishop Berkeley's order, and moved from West towards the East. No more appreciative sketch has appeared anywhere. The "Horses of California" affords opportunity to portray a large number of notables, human and equine, of the sunset land. "Sunny Stanislaus," setting forth the beauties and wonders of that interesting county, by pen and picture, is calculated to further migration to Eldorado.

WORCESTER INDUSTRIES

V.

The Making of Machine-Tools.



PRENTICE BROS. CO.'S SHOPS.

Nowhere is the perfection of mechanical art brought to a higher point than in the high-class machine-tool. Without the perfect machine-tool perfection in every branch of the mechanical arts and in many of the scientific arts would be missing. It is in the city of Worcester that these tools, special machines, as well as standard tools, such as the lathe and drill and planer, have achieved this advanced perfection.

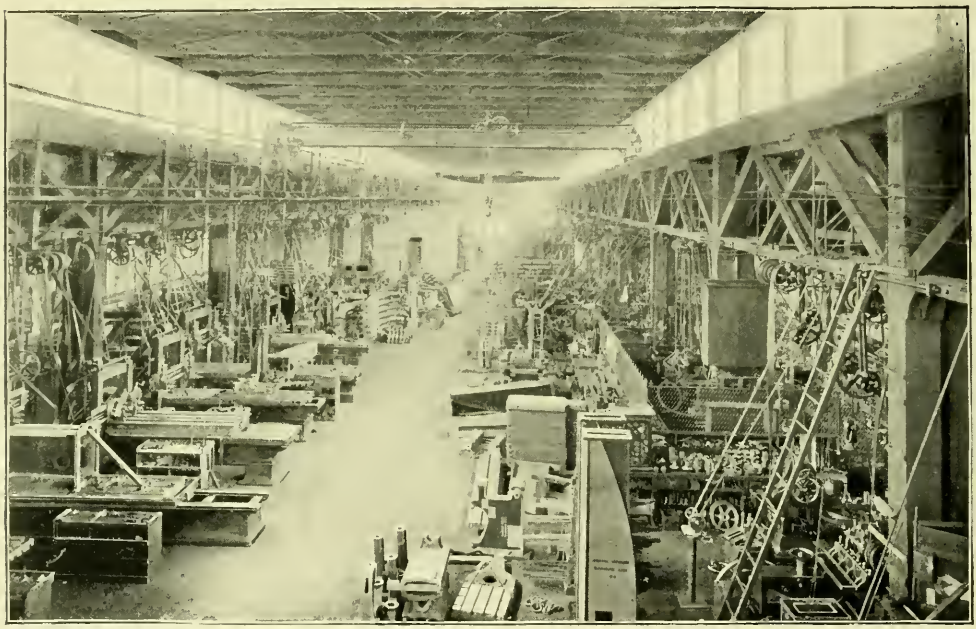
The shops of the Prentice Brothers Company at 667 Cambridge Street are among the finest in the world, and the Prentice tools are known everywhere as the standard of high-grade machinery. The radial drills and engine lathes, which constitute the product of the shops, are found in every well-equipped machine-shop, not only in America, but in Europe and other countries where iron and steel are shaped by machinery. It was thirty years ago, in 1872, when Vernon F. and Albert F. Prentice formed a co-partnership for the manufacture of blacksmiths' drills. The history of the machine-tool's progress is the history of Prentice Brothers, for they have always been at least abreast of competitors, and more often ahead in the long series of steps in the evolution of iron-working machinery. The little drill which the concern built in 1872 was a crude atom of a machine when compared to the magnificent electrically driven seventeen-ton driller running as noiselessly as a well-aligned shafting in its bearings, and so perfectly adjusted that the hand of a child can swing the massive arm. And the first lathe built by the firm would look beside the modern Prentice motor-

driven lathe like a seventeenth-century spinnet beside a twentieth-century grand piano.

As the trend of manufacture began to approach specialization the Worcester concern kept well up at the front. Lathes and radial drills of all descriptions were accepted as the special product of these shops, and the Company has not been led away by temptation to branch out into other lines.

The business began in a small way, and at various times occupied different locations, each moving being necessary because of rapid growth and the consequent demand for more room. Finally the new shop, the present main building of the Cambridge-street plant, was erected. This was in 1889. The Company did not occupy the whole of the building at that time. The Woodward & Powell Planer Company had the northerly end of the building. But hardly was the Prentice Company in its new quarters when the demand for more room again presented itself. A new building was erected east of the main building, and later another new building on the other side of the main structure. Then the Planer Company went to its new plant on Webster Street, and the Prentice Brothers Company, now become a Massachusetts corporation with $100,000 capital stock, occupied the entire big building.

This main building is 320 feet long and 100 feet wide, with a high, broad, monitor roof. Two traveling cranes, with lifting capacity of fifteen tons each, run the entire length of the building, and cover all the space beneath the monitor. These great cranes pick up the immense parts of the big drills and handle them as if they were little toys. All the heavy work is done within reach of the cranes, while under the wings of the main building and in the two annexes is located the machinery with which the lighter part are worked. The annexes are connected with the main building by covered ways, so that the whole plant is practically under one roof.



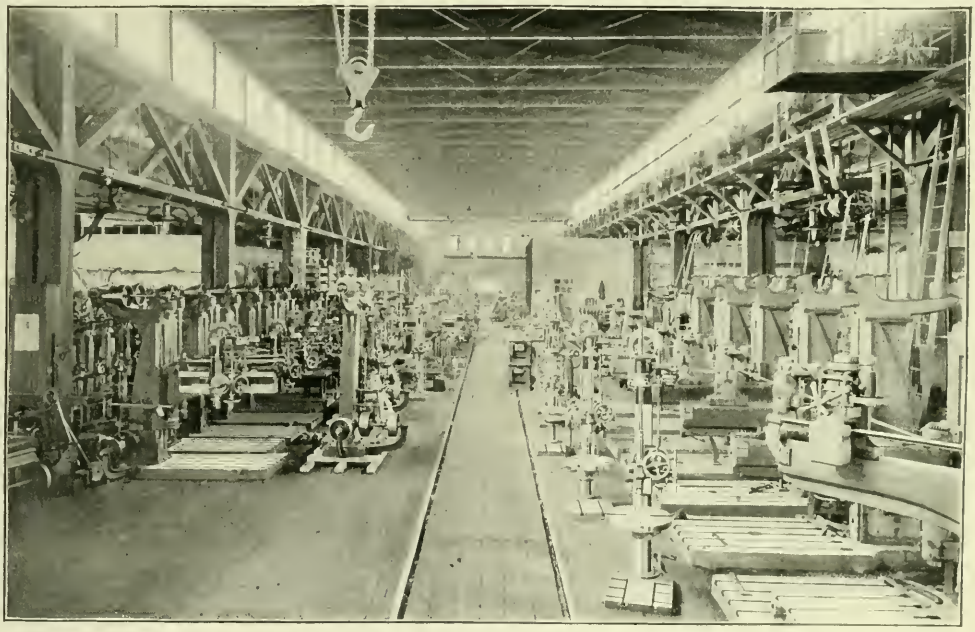
MAIN SHOP, LOOKING NORTH.

The eastern annex contains a battery of most interesting machines, the Gisholts, the lathes whose turrets and their cutters reduce the cost of working the smaller parts of the lathes and drills to a minimum. Pieces which formerly cost twenty cents to work

from the casting are now produced for four cents each. Cutters once set in these machines will turn out scores of duplicate parts, more alike even than two peas in a pod, because nature does not duplicate exactly even in peas, and the Gisholt machines do. These wonderful tools chuck and drill and ream and finish off the casting of a small pulley or other irregular-shaped part without its removal, where, under the old method of doing one thing at a time, much time of an engine-lathe and its operator was required.

every department. Each class of work is handled by special gangs of workmen with a gang foreman. Such specialization necessarily results in extreme expertness. The general use of jigs and fixtures, as the tools and appliances for turning out individual parts are termed, is accompanied by a rigid system of inspection, thus standardizing the work and securing uniform accuracy.

The greatest care is taken from the very beginning. For example, all cast-iron parts, subject to working stress,



LOOKING SOUTH, MAIN SHOP.

So it is everywhere in the Prentice Brothers' shops. The brains of the masters of this great industry, combined with the brains of many bright and ingenious Worcester mechanics, have been constantly working to achieve economy of production as well as to keep on improving the tools which bear the Company's name. Many of the jigs and devices which accomplish these results are worthy of a detailed description in themselves, but it is not the intention of this article to go into the technical side of the machine-tool business.

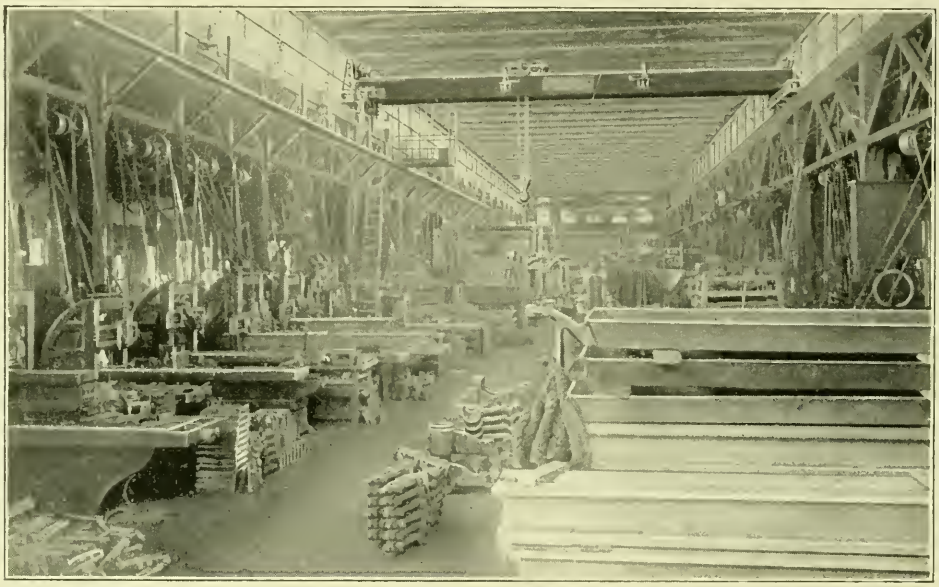
The work is carefully specialized in

such as gears, are annealed before machining by being packed in cast-iron chips and kept hot for twenty-four hours in an annealing furnace and then permitted to cool slowly. Uniform softness is thus obtained, which is of great advantage in machining, especially where parts are made in large numbers, for one overhard casting will make more trouble in dulling tools in the lathe turrets, and consequently cause more expense, than the production of many dozen of the same parts machined when uniformly soft. Greater durability is also obtained as a result of careful annealing.

Noiseless-running machines are a source of pride in the Prentice Brothers' shops, and with reason. Their machine-tools are as noiseless as machine-tools can be, and where there is no noise there must be perfect adjustment and greater accuracy of the machine and also longer life. All this is accomplished only by taking the greatest pains with all parts of the work, no matter how comparatively unimportant.

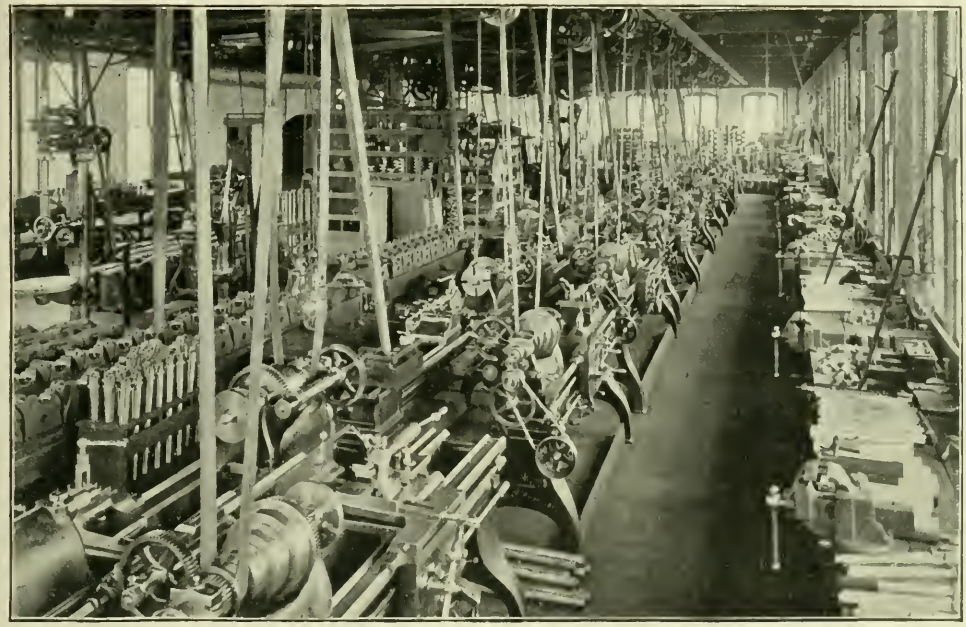
To show how carefully everything is done the large gears for the radial drillers are planed, giving an octoid-tooth curve. It would be considered a crime in the Prentice shops to put a file or piece of emery-paper to a spindle or shaft. All such parts are not polished. They are finished in an emery-grinder, and the purchaser who knows his business sees the distinct cuts of the emery-wheel, which means to him the perfection of cylindrical form and accuracy. No man with a file or emery-paper can make a true cylinder in a lathe, a fact that every machinist knows, but the modern emery-grinder can.

The stock-rooms of this modern plant are worth a visit just to see with what care everything is looked out for. Each kind of steel on the rack has its color. Crucible steel may be blue, and soft machinery steel red, and another sort yellow. The end of each piece is painted with its particular color, so that an end view of the bunches of steel rods on the racks present a rainbow effect. Another stock-room contains the finished parts in duplicate. No matter what the part required in a Prentice tool, that part will be found in this stock-room. Every casting has upon it a letter and number. The letter represents the style and size of the tool for which the casting is intended. The number tells what the part is by comparison with a blue-print. If the owner of a Prentice drill in New York wishes to replace one of its parts he has only to take the letter and number cast upon it and wire that letter and number to the Prentice Brothers' office in Worcester, and the next express will convey the desired duplicate to the shop in New York.



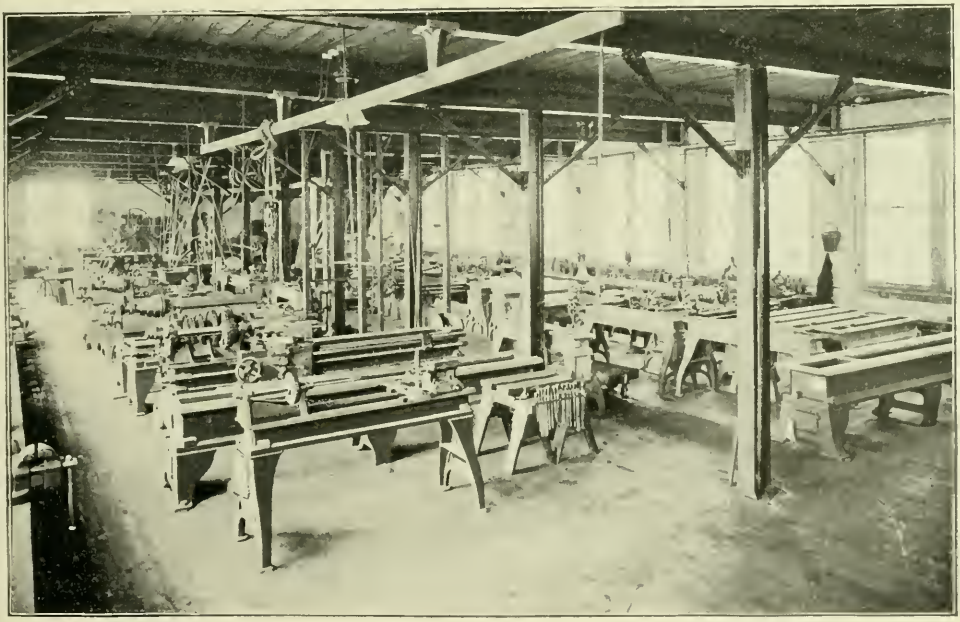
PLANING DEPARTMENT, MAIN SHOP.

This is the American system of manufacturing machinery, and nowhere is it better demonstrated than at the Prentice Brothers Company's shops. In these shops some of the smaller sizes of drills are built in batches of 200 at a time. The output of these shops is

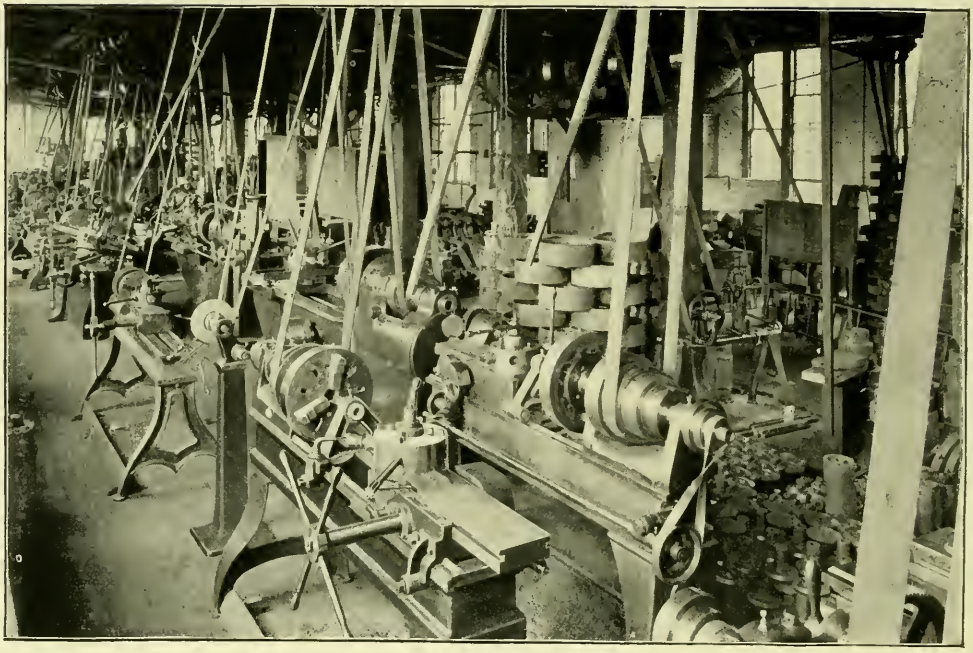


LATHE-HEAD DEPARTMENT.

more than 600 engine-lathes and more than 1800 radial drills of all sizes a year. The sizes of the drills range from little machines, weighing 750 pounds, to monsters requiring 56,000 pounds of steel and iron in their construction. Lathes are built up to 32-inches swing and 30-feet bed. Most of the tools are made in standard sizes, but each year a considerable number of special tools are shipped to various parts of the United States and across the water. One giant gang-drill, weighing seventeen tons and having six spin-

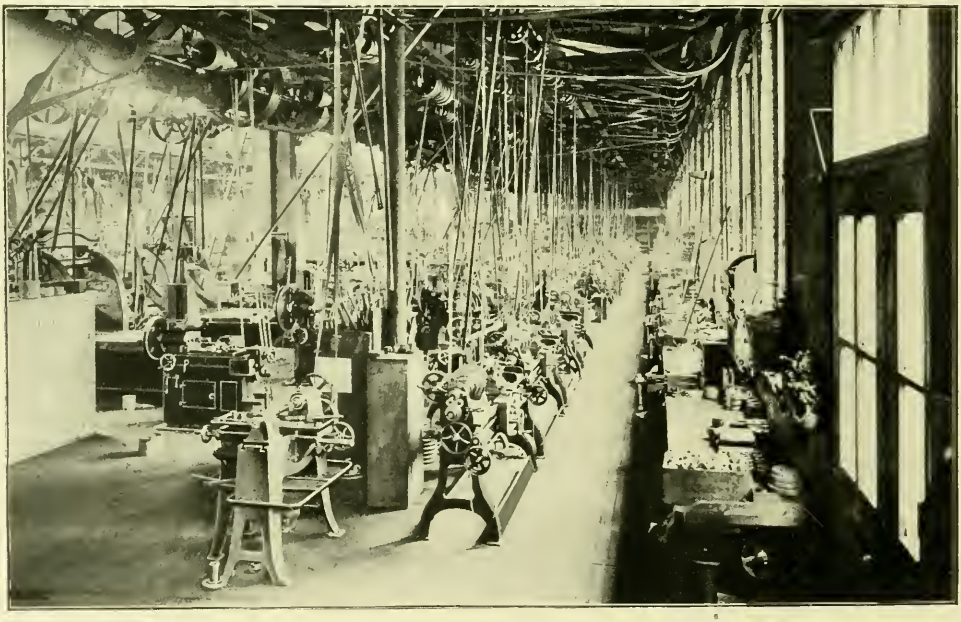


LATHE ERECTING DEPARTMENT.



CHUCKING DEPARTMENT.

dles, was built for a locomotive builder for boring engine frames—six holes at one crack—a process which had hitherto been considered an impossibility. One monster radial, nineteen feet high, is helping to build steel battleships for the United States navy. Everywhere in the world where there are machine-shops you will find Prentice tools, standard or special; gang-drills with eight spindles, sensitive drills, wall drills as compact as a marine engine,



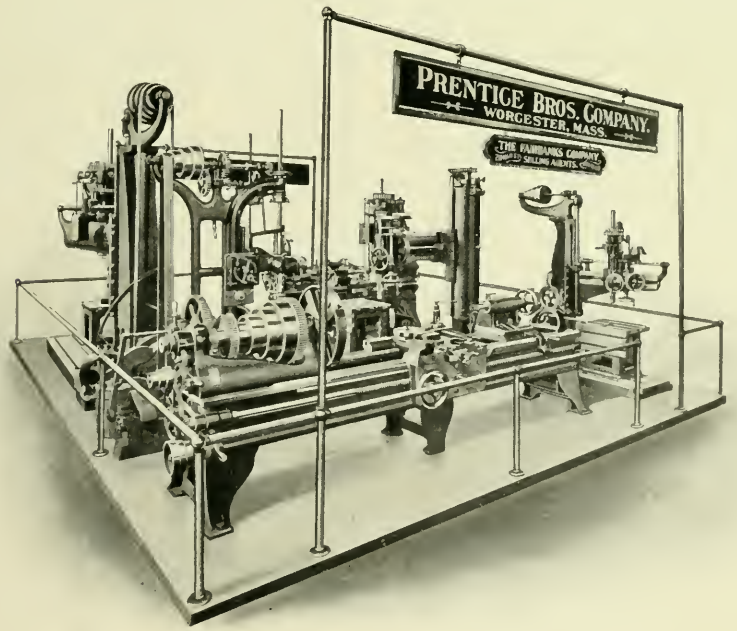
EAST SIDE, MAIN SHOP.

in fact, every sort of a drill required in the manufacture of machinery.

The Company has a complete electric plant which lights the shop, and will soon operate the traveling cranes. It has another important purpose in these shops for the Prentice Brothers Company are making an important feature of electrically-driven machinery. The Company's exhibit at the Pan-American Exhibition at Buffalo last year contained several motor-driven lathes and drills which were awarded a gold and a silver medal. These tools attracted a vast amount of attention from owners of machine shops, and many orders resulted.

The Prentice motor-driven tools are in advance of those of competitors because of their economy of operation, as well as from the fact that the initial cost of the motor is smaller because the motor is smaller. Other motor-driven tools regulate speed by electric current. When slow speed is required of the lathe, the motor is run slower. This is expensive. To maintain the required power when running a motor slow it is necessary to have a larger motor than would be the case where the motor is maintained at an economical speed. The Prentice Brothers' tools maintain this even current. The speed of the lathe is varied by cones of gears corresponding to the cone-pulleys and back gears of the belt-driven lathe This advantage is obtained in the Prentice motor-driven drills, as well as in the lathes.

In describing in this general way the Prentice Brothers' shops, their most unusual cleanliness should be given emphasis. The shops are perfectly lighted from the glass monitor roof, and from windows which penetrate the walls at frequent intervals, so that if dirt exists it is visible. The machines are kept bright and clean, the floors are swept, there is no litter of unnecessary tools and bits of iron. Nothing, unless required for immediate use, is permitted to be about the shop. Such a shop means a good deal to the men employed in it. They can do better work, keep better health, and should be better contented than their fellows whose labor is in poorly-lighted and worst-ventilated rooms.



PAN-AMERICAN EXHIBIT.

WORCESTER WOMAN'S CLUB

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In a recent number of the WORCESTER MAGAZINE was printed a report from the committee chosen by the Worcester Woman's Club to consider the advisability of taking an active interest in the public schools. The report with its recommendations was adopted, and the following Committee on Public Schools was elected: Dr. Mary E. Barrell, Mrs. Florence W. Bliss, Mrs. Abbie L. McCullagh, Mrs. Helen A. B. Morse, Mrs. Eliza D. Robinson. The committee organized with Mrs. Robinson, chairman, and Mrs. McCullagh, secretary. The following persons have consented to act as an advisory committee: Dr. E. A. Engler, president of the Worcester Polytechnic; Dr. W. A. Burnham of Clark University; Charles M. Thayer, Esq.; Rockwood Hoar, Esq.; Rev. Austin S. Garver, Rev. A. W. Hitchcock, Mrs. C. F. Marble, Mrs. J. Russel Marble, Mrs. E. C. Sanford, Mrs. Leonard Wheeler.

Active interest in the public schools may be said to have begun with the agitation in the Woman's Club upon the subject of kindergarten teaching and manual training, and a few years later this interest was stimulated by the formation of the Civic Club.

The vacation schools, which have been successfully carried on for several years, under the supervision of a committee appointed by the Woman's Club, originated with that organization.

Another important work undertaken by the Civic Club was to secure the election of women as members of the School Board. The hearty co-operation of the men of the city irrespective of party resulted in the election of four candidates. In reviewing this movement, we may perhaps be permitted to appropriate the words of Abbie W. May, first President of the Massachusetts School Suffrage Association, in her report of the work done in Boston. The result of the work proved—

"First, that there are in Boston and ready to serve on schools women whose high character, whose intelligence and whose faithfulness to duty are known to be so great, that they are recognized as worthy to be honored with the high responsibility, and are sure to merit it well.

"Second, it shows that the political parties of the city are willing to nominate women as members of the School Board.

"The third proof, stated by Miss May, that the determination of the women to vote for good candidates only had its effect on the nominations of the political parties, we may not equally claim, but it is in our power to make it possible to do so in the future."

The administration of our public schools is in the hands of the School Board, and it is of the greatest importance that "men and women of high moral character and good education, and with time and spirit for the public service, should be elected to that office." Women can be of the highest service in creating an enlightened public sentiment in the community upon this subject. They should prove, however, that their interest in the schools is not one of mere sentiment, but of the practical sort, by exercising their right to vote both for the nomination and election of those to whom the schools shall be entrusted.

The Advisory Committee of the Committee on Public Schools appointed by the Massachusetts State Federation of Women's Clubs, which consists of Dr. Balliet, chairman, President Charles W. Eliot, Mr. S. B. Capen, Mrs. Alice Freeman Palmer, Prof. Ellen Carlisle, and other prominent educators, declares in a circular just issued "that women's clubs can most effectively aid in improving the public schools," and "that the combined efforts of club women and college women *wisely directed* can be greatly instrumental in making the schools what they should be."

The aim of the Committee on Public Schools of the Worcester Woman's Club is to acquire an intelligent knowledge of our schools, and in a sympathetic spirit work for their best interest. That this work may be effectual, we ask the cordial support and interest of all citizens. E. D. ROBINSON, Chairman.

OUT WEST, formerly "The Land of Sunshine;" the magazine might be known as the periodical with a mission. We are accustomed to magazines many, magazines with illustrations and magazines without, and aside from a desire to be interesting and respectable it might be said of them that they seemingly existed only with the hope, if not the expectation, of making money. Not so with this monthly visitor from the far-away shores of the Pacific. From the first page to the last every word is made to count for the interests of the Pacific slope. There is a pictorial cover on which an engaging-looking woman, pointing to the illimitable occidental ocean, is saying to the scantily-clad, muscularly-developed man by her side, "The nation back of us; the world in front." The editor, Charles F. Lummis, New England born, reared and educated, so far as schools are concerned, is an athlete, whether holding a gun, camera, carpenter's hammer or a pen. He never minces matters, but drives at them with perfect indifference as to who or what may be in the way. He achieved fame when, dog accompanied, he crossed the continent afoot and began his researches among the Indians and other natives of the extreme Southwest, the results of which we have seen in Eastern publications. Seven years ago he was prompted to begin the magazine whose monthly visits have been a regular pleasure. While Mr. Lummis at times assumes some of the proverbial sentiment of the West as regards the East, as a rule he is so bent on exploiting the interests of the land beyond the Rockies that he has neither time nor space for words about his old home. Possibly it is in his mind that for more than 200 years the Atlantic seaboard has been the theme of poet and historian, while his is a subject of recent date. At any rate, he finds subjects for his pen that are entertaining from start to finish. The August number has the third article on "The Right Hand of the Continent," and were Charles Nordhoff living there is little doubt that he would at once doff his hat to one who even better than himself can sing the praises of California. Not only are the illustrations superb but they are wonderfully significant, and, for the most part, are from photographs made by Mr. Lummis himself. The story of Crater Lake, Oregon, is timely, considering the paroxysms in Martinique. "Child Birds of Our Gardens" is a bit of nature-study in Pasadena. Even the poetry has a California flavor. Fiction and history alike seek the far West for themes. "The Sequoya League," monthly sets forth progress in efforts to advance the cause of the Indians. Were H. H. living how she would enjoy this chapter. The Landmarks Club exists to conserve the missions and other landmarks of Southern California. "In the Lion's Den" is the title of the chapter devoted to the editor's reflections on men and events. He always hews to the line. Had the representatives of the woman's clubs who convened in Los Angeles read and reflected on Mr. Lummis's advice they had made a different record in regard to colored organizations. "In the Twentieth-century Work," William E. Smythe, once a Worcester boy, sets forth the advantages to come to the arid West through irrigation. No man in America has given more time and thought to the subject, and no man is better qualified to discuss the subject, and it is not too much to claim that some part of the success in getting the irrigating scheme through Congress was owing to arguments furnished by Mr. Smythe. The California Constructive League exists to advance the possibilities of California politically. In "Asti, Sonoma County," we have the story of an Italian-Swiss Colony. By pen and camera, through fourteen pages, the reader follows the culture of orange and grape till he clearly sees and almost tastes the luscious fruit. California has reason to be proud of her champion. Published in Los Angeles, Cal. $1 per year.

What People Might Think.

"Autumn nodding o'er the yellow plain."
Thompson.

SEPTEMBER, this year, comes not as a pleasant relief from the heated term, for New England has had none. The season will be remembered long as the summer without a hot spell. The year 1816, in some parts of our land, was recalled by those who experienced its rigors as "1816 and froze to death." In spite of the lack of extreme heat, fruit and vegetables have appeared at their accustomed times, indeed, in many instances, somewhat earlier than usual. The weather has thus far in 1902 afforded an unusually interesting subject of conversation.

FEW of those who esteemed themselves so highly honored by the privilege of shaking the hand of President Schwab at the May banquet of the Board of Trade thought that his strenuous life would so soon be interrupted. They pay the penalty who go the pace, and accelerated heart-beats must have their compensation. The unparalleled mansion on Fifth Avenue, the unequaled salary, have no power to avert the inevitable collapse when nature is unduly pressed. Possibly some of those who heard the Wire and Steel King speak recall the hint thrown out by him in his happy remarks that perhaps they would not so covet his position if they knew the burdens and responsibilities that went with it. He knew then and now suffers the penalty that overworked nature imposes.

IT appears that the much-sought industrial plant of the United Shoemaking Machinery plant is to locate in Beverly. Had it been understood that so large a part of the management as the President and two of the Directors were residents of the famous Beantown, and that they were anxious to secure the locating of the industry, it is just possible that Worcester's Board of Trade had denied itself the pleasure of entertaining the representatives of the corporation and of showing them the many advantages of our inland city. However, there is no great loss without some small gain, and those who so glowingly extolled the merits of the Heart of the Commonwealth will be all the more ready to tell her story when the next peripatetic industry is preparing to take a walk. It sometimes looks as though many of our later enterprises were like the chronic migrants of the earlier West, who lived in tent-covered wagons ever ready to move on if there were the least provocation.

PRINCIPAL Russell's remarks before the Board of Trade, uttered last spring, are worthy of a careful reading by all those who are interested in the good of our schools, a feature of our municipal life which absorbs far more of our tax levy than any other call, indeed almost as much as all the others united. Such being the case, this city and all cities have the right to demand that the best, and only the best, be rendered for the outlay. It will be seen that the distinguished instructor does not so much criticise the manner of teaching, nor what is taught, as he does the fact that so much is undertaken in the somewhat restricted time allotted to school life. There is little doubt that the words, given in the principal's happiest colloquial style, will receive the thorough approval, not only of fathers and mothers, but of the teachers themselves, who are not responsible for the crowded condition of the curriculum, but who are compelled to take matters as they find them, and to make the best of them. Little by little the courses of study have grown, till now they need some educational Alexander to cut the knot which holds them together, and thus permit a much-needed readjustment.

THE WORCESTER MAGAZINE is interested in any and every thing which even looks towards the advancement of municipal government. Hence it cheerfully admits to its columns all honest efforts to lift city rule out of the ruts and depressions into which, for any reason, it appears to have fallen. That the best form of municipal management has as yet come into vogue

few thoughtful people would venture to affirm. The government of the future, possibly, is to-day wholly unrevealed. Certainly there must be some change from systems which lie open to at least the imputation of venality at almost every turn. The late Governor Wolcott was not a man to speak without due consideration, and the charges which he laid at the doors of city management, in his noted Lowell address, are worthy of prolonged discussion. The State of Ohio, through a decision of her Supreme Court, finds herself without any form of city management, and it is probable that a special session of the Legislature will be necessary to get the State out of her muddle. In an effort to avoid certain faults, successive Legislatures succeeded in doing just what was most deprecated, and when the irrepressible Tom Johnson of Cleveland pushed his schemes too far and appeals were taken to the courts, then came the decision which imposes the necessity of beginning over again. Our own Hon. Joseph H. Walker has often laid down the aphorism that the further we get from the old-fashioned town meeting, just so much nearer are we to the possibilities of what confronts every city of ten years' life in New England and elsewhere. Nice, snug, little Boards of Aldermen with scarcely larger Councils are just what those with axes to grind are delighted to find. It is comparatively easy to take care of one's friends in such a body. Boss Tweed's purse could catch and hold a majority of the thirty-two members of New York's Senate, but even his resources would have, or might have, failed before the fifty men who constitute that body now. Mr. Walker has called for larger bodies in each division of city government. Popularize them and they can no more be reached by the man with an extended hand than could such a being buy up the voters of a rock-ribbed township, who, in public meeting assembled, debate the questions pertaining to the public weal.

FEW events in recent Worcester annals have awakened more public interest than the August regatta. The weather proved to be all that could be desired, and both participants and onlookers pronounced the sports a magnificent success. Not since Harvard and Yale, as plucky rivals, coursed the waters north of the causeway have so many thousands of people crowded Quinsigamond's shore to see aquatic contests. Again was made manifest the desirableness of a substitute for the stretch of earth connecting Worcester and Shrewsbury. The subject of a beautiful bridge to span our lovely sheet of water is sure to stare our people in the face till the project materializes. Though the course was approved by those who rowed over it and though all beholders enthusiastically indicated their interest, there was no one who did not realize that an elevated bridge had added greatly to the success of the occasion. Never were there so many boats in the north-side waters as when the sports were progressing, and not the least interesting of the events was the successful passing of the narrow passage, through which all crafts must go on their way back. With a proper bridge there would be no necessity of a moment's delay at any time. The great popularity of the sports and the manifest need of the bridge have aroused new attention to the plan as outlined in these columns several months ago by Mr. Thomas J. Sawyer. One of Worcester's most prominent architects, Mr. Stephen C. Earle, has given much attention to the subject; has carefully attended to the securing of a charter for a corporation to develope and maintain the attractiveness of our unrivaled lake. Again the public press is giving space to the consideration of the plan. Our city is interested in everything that contributes to its material welfare, and the best aquatic race-course in New England will advertise Worcester as scarcely anything else can do. The bridge means dollars in Worcester pockets, thus appealing to the most sordid of reasons, but over and beyond that is the chance to embellish in a way to make the Heart of the Commonwealth delightful to all lovers of the beautiful.

WORCESTER BOARD OF TRADE

BANK BUILDING, 11 FOSTER STREET.

OPEN 7.30 A.M. TO 6 P.M. PRESIDENT'S HOURS: FROM 10 TO 11 A.M. TUESDAYS, THURSDAYS, AND SATURDAYS.

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Board of Trade Notes.

There were twenty-one foreign inquiries received on Aug. 21 in response to the Spanish Export Sheets, which were sent out about the first of August.

As in some cases, one letter calls for information in regard to different manufactured goods, in one case thirty-six articles being mentioned, this is of interest to a great many Worcester manufacturers.

It is very necessary that these inquiries should be answered promptly, as this is the method by which the Board of Trade acknowledges the communication. Care should also be taken to use sufficient postage for foreign mail, as if domestic rate of postage is used it is not pleasant for the foreign buyer to be obliged to pay deficient postage.

A co-operation, on the part of Worcester manufacturers will enable the Board of Trade, to extend a valuable service to Worcester people, by directing the attention of the world to Worcester, as a city, remarkable for its variety of manufacturing interests, and next year it will not be so difficult to issue an Export Sheet, which will be a credit to the city.

There are a large number of industries not represented on this year's sheet because it did not appeal to them as being a feasible plan. The inquiries are certainly being received.

It remains to be seen whether it is idle curiosity, or a desire to buy goods which brings the replies.

Upon the reading-room tables may be found a large number of papers and documents pertaining to the city of Rochester, N. Y., known the world over as the Flour City. Among these data is a large volume giving an extended description of the varied industries of the flourishing city by the Genesee.

The tables of the reading-room are well supplied with matter to interest and instruct. In addition to some of the popular magazines there are documents from many of the leading cities, setting forth their respective advantages. More and more business men are coming to realize the handiness of the rooms as a running-in-place.

The next regular meeting of the Directors of the Board of Trade will be held Thursday, Sept. 11. President Blodget will be pleased to receive suggestions from all members of the Advisory Committee pertaining to matters which should be taken up by the Board of Trade.

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THE WORCESTER MAGAZINE

OCTOBER

1902

DEVOTED TO

Good Citizenship and Municipal Development

PUBLISHED MONTHLY BY THE BOARD OF TRADE

WORCESTER, MASSACHUSETTS,

U. S. A.

B. W. CARLOW & CO.,

INVESTMENT SECURITIES

520-521 State Mutual Building, Worcester.

NEW YORK. BOSTON.

CARROLL D. WRIGHT,
President, Collegiate Department, Clark University.

The Worcester Magazine.

Vol. IV. OCTOBER, 1902. No. 4.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

Collegiate Department, Clark University.

WHILE Worcester is primarily a manufacturing city, she has ever been conspicuous for her interest in all educational matters. She early turned her attention to the expansion and perfecting of her public schools, and years ago became the seat of first-class institutions of higher grades. Besides, her young people have been among the most successful of the patrons of other New England colleges. Worcester Academy, the Oread and the Highland Military School have done their part for scholarly Worcester, and, beyond them, we have had Holy Cross College, the Normal School, Worcester Polytechnic, Clark University, and, later, the School of Domestic Economy, all accomplishing an excellent end, but a popular institution to which all Worcester boys might go if they desired has been wanting till this month of October, 1902.

The late Jonas Clark, who so munificently endowed the University bearing his name and whose decennial was celebrated in 1899, on his decease, left specific instructions as to the founding and maintenance of a collegiate department in connection with the established University. In accordance with those instructions, the Trustees have organized a faculty and have issued an announcement as to the scope of the proposed institution. Evidently the projectors of the department are not bound by tradition in their formulation, since they have reduced the course from the almost invariable four years to three, and instead of a prescribed amount of preparatory matter, express a willingness to take on certificate graduates of first-class New England high schools or schools of similar grade; also the prospectus would indicate that applicants will be admitted who satisfy the authorities that they are properly equipped for entrance, thus doing away with the somewhat fussy requirements now demanded by all institutions that do not accept certificates.

That the young men of Worcester and vicinity are quick to appreciate this opportunity is evident in the large num-

ber of those applying for admission, a number already much in excess of that expected when the opening was announced. There will be no less to seek their education at the long-established colleges; those entering here are, in the majority of cases, men to whom the new department means an education brought to their very doors. For many years the College of the Holy Cross has afforded opportunities to boys of the Catholic religion which only those of Boston had in an equal degree; hence the Classical High School has regularly graduated a large number who have thereafter betaken themselves to the College on the hill and thence have entered upon walks in life otherwise closed to them. In the same way it is fair to expect that as the years go by, many boys will complete their courses in the several high schools of Worcester and the near-by towns who would, under former conditions, stop short of the completion of a course, for the reason that they could not afford the expense of a full college education.

While it might be said with propriety that Mr. Clark did not locate his University in the most desirable manner and, possibly, his notions of collegiate architecture were not in accord with those of people who had given years to the consideration of such matters, yet Americans are wont to adapt themselves to the inevitable and to look upon the best side of the picture. The main edifice has been subjected to a deal of furbishing and painting. The rooms have been re-arranged with special reference to the demands of the entering class. The large University library which has occupied so much of the space in the older edifice will soon find a permanent location in the new building, which is advancing rapidly and which will be an ornament to the south end of Main Street and to the University grounds. The city of Worcester, with a spirit of appreciation of the placing of an institution of so high a grade in her midst, has laid out and purposes to maintain an open space in front of the University grounds, giving to the same the name of University Park. Accessibleness is one of the prime requisites in these days, and this the institution has in the highest degree, since there is a constant procession of street cars passing, by whose system of transfers a nickel fare will place all students, in a very short time, in the remotest part of the city, and no less than twenty-seven near-by towns are thus placed in quick connection. The steam roads, also, will bring to Worcester the students from as many more, though possibly a little more remote.

Few colleges have started into being with a larger endowment. Considerably more than a million of dollars have been set apart for the maintenance of this particular department, so there will be no lack of funds wherewith to run the institution. The experience of those who have so long had to do with the University proper will be of great utility in the developing of this new venture. For more than a decade our people have known that instruction of the highest kind was given in Clark University, but so different was the whole system from that in vogue elsewhere that it was only when there was a summer school in progress did its existence impress itself upon the mass of our citizens. Now all this is to be changed, for while the University courses are still maintained as hitherto, there will be added to the great edifice on South Main Street the presence of active, vigorous youngsters, and we may confidently look forward to football matches

between the rival teams of Clark University and those of Holy Cross and the Worcester Polytechnic. A real, live college yell from this part of Worcester will be not only an innovation, but a joyful addition to the many ear-pleasers in which the city abounds.

Wednesday, October 1, is set down as the opening day, and thenceforward to the 19th of June the college year progresses, with a week out at Christmas and the same at Easter. Thus the year is five weeks shorter than that of the public schools, but much can be done in thirty-five weeks if proper application is displayed. For the opening year there is no expense for tuition, this alone being a wide departure from the established usage elsewhere. For the second year there will be a fee of twenty-five dollars, and the regular cost of tuition during the third year will be fifty dollars. Just what the future fee will be is not as yet determined. Doubtless, the figure will be established as a result of experience in the opening years of the college. It is expected that all candidates for admission will remain, so far as they are concerned, through the course, and will have to sign an agreement to this effect, thus cutting off some who would like to experiment for a while trying to find out whether they like the place and its appointments.

The Board of Trade especially interests itself in the securing of new industries and in their development, but it also greets any extension of educational opportunity with all the pleasure with which it would hail the placing of a manufacturing establishment employing hundreds of hands. This new venture means much to this bustling, teeming city. Our boys who do not care for the mechanical work of the "Tech," and who have not the requirements for the Holy Cross, have now a chance to get all that would be theirs were they residents of Cambridge, Amherst or New Haven. It does not follow because a man is a skilled mechanic that his sons will follow in his footsteps. They may be among those to whom tools are worse than Greek, and the study of the latter is their true vocation. Here comes their chance. Everything nowadays is kaleidoscopic and each turn of the generations shifts the people, not always into better positions, but into different ones; the new college adds a possibility for education and employment till now unknown in Worcester.

CLARK UNIVERSITY.

With such a design as the College department contemplates, and in such a city as Worcester with its immense number of practical industries, it was eminently desirable that the most practical of men should be secured to steer

the new project through the beginning of its voyage. It is an old saying that if we wish anything done we should employ the busiest of men. This must have been in the minds of the Trustees when they offered the Presidency to the Hon. Carroll D. Wright of Washington, a man who is already loaded down with duties; but he has seen a chance to accept and to assume the new burden. In addition to being the Commissioner of Labor at the nation's capital, he holds, besides his Presidency here, no less than five other educational positions, viz., he is the President of the Board of Trustees of the Hackley School of Tarrytown, N. Y., a boys' preparatory school; President of the association which conducts the Industrial School for colored youths at Manassas, Va.; he is the Honorary Professor of Statistics and Social Economics in the Catholic University in Washington, and for several years has held a lectureship in the same branches in the Columbian University, also in Washington; finally he is trustee of the new Carnegie institution and one of the Executive Committee, having most to do with its organization. With such a burden of responsibilities Worcester may well feel flattered that Colonel Wright has seen fit to direct the course of our new College.

RUFUS C. BENTLEY,
Dean of the Faculty.

Three members of the Faculty have been connected with the University for many years, Drs. Story and Hodge from the start, and Dr. Webster coming

soon after. In the new College they will conduct courses in mathematics, biology, and physics, respectively. Rufus C. Bentley, A.M., the Dean of the Faculty, is a graduate of the University of Nebraska, 1894, the most of whose experience in an educational way has been had in the West. He has been a Fellow in Education, Teachers' College, Columbia University, and for the past year a Fellow in Pedagogy in Clark; the choice of President Wright for his present position most excellent results are expected from his labors.

The instructors, six in number, are:

Joseph G. Coffin, B.S., a graduate of Massachusetts Institute of Technology, physics.

Charles W. Easley, A.M., Dickinson College, chemistry.

Frederick H. Hodge, A.M., Boston University, mathematics.

Samuel P. Capen, Ph.D., Tufts College, modern languages.

Frederick A. Bushee, Ph.D., Dartmouth, economics and history.

Andrew J. George, A.M., Amherst, English.

While, as will be seen in the several courses offered, students may elect a wide range and may even pursue an old-fashioned college regimen, particular prominence is given to mathematics as the proper groundwork of college education, "under the belief that a thorough equipment in mathematics enables the student to grasp more clearly and fully the principles of most other departments of knowledge, especially in his study of physics, chemistry, biology and other branches."

There are eleven regular courses of instruction as follows: I, Mathematics; II, English, the English language and literature; III, History; IV, Physics; V, Chemistry; VI, Biology, including botany and zoölogy; VII, Modern Languages, French, German and Spanish; VIII, Political Science and Civics; IX, Economics and Sociology; X, Psychology, ethics, and philosophy; XI, Latin and Greek, the Latin and Greek languages and literature.

The courses offered for the Freshmen year include all the foregoing except numbers VIII, IX and X.

The well-selected library of the University will afford admirable opportunity for research, and added to the same are the facilities of the Public Library of Worcester, than which very few places have better.

The ceremonies of inauguration, to take place October 9, will draw together a large number of prominent educators, especially from New England. While this favored region already possesses a large number of exceptionally well-equipped institutions, Worcester confidently expects her latest addition to prove itself worthy of a place in the front ranks.

Pressure in the Public Schools.

A Smoke-talk before the Worcester Board of Trade by E. Harlow Russell, Principal Worcester State Normal School.

(Continued from the September number.)

But I am speaking now of the pressure, and I come to the matter of school management; discipline. There is no question whatever that the discipline of our public schools is far more discriminating and humane than it was forty or fifty years ago, and every single step in this direction must bring pressure upon the teacher and pupil. Reasoning, persuasion, tact, have largely taken the place of authority and force. We are all proud of that, but it means something to the teacher. It means a great strain; how to avoid the mere exhibition of authority, or force, which is about the shortest cut to what you want done. I have traveled that road and know it. It is a very straight road indeed. I remember being in Buffalo, at one of those large grammar schools, where the highest classes were almost young men who worked on the canal-boats in summer and went to school in winter. The master was Colonel Thorpe, who, I believe, had been on Sheridan's staff during the war. Every young man as he went out of the door on dismissal of the class looked around and made a bow and said "Good night" to the teacher. And I said, "How in the world do you manage this—to get those boys—(they were pretty rough looking), but what gentlemen they are!" "Well," said Colonel Thorpe, "it is only because every one of them knows he is apt to be knocked stiff in his tracks if he doesn't!" Now that is a labor-saving device. But that would not be tolerated in Worcester today, nor in Buffalo. This was nearly thirty years ago. Now we have to take a more trying and roundabout way; and this art of persuasion and tact, and discrimination, is made still harder by the great foreign element that we continually receive into our schools year by year. Most of them have been used to nothing else but this short cut, and a severe cut, too, and they know nothing else. They are not open to appeal. They don't know what you mean by kindness. They have had no moral appeal made to them, and they need to be weaned from brutality to secure confidence. This is sometimes a long and painful, though always a beautiful and admirable, process. I have seen it used, but it costs something! It takes time, and it brings any amount of pressure. It is possible for one or two pupils to send a good teacher home every night prostrated in her nervous system; prostrated with the effort she has been making all day to treat the pupils with discrimination, tact, humanity, and patience, etc. Colonel Thorpe would have made very short work of that. There is far more attention to individual pupils, to their temperament, to their home surroundings; their environment. This is considered vastly more than formerly. All this calls for more resources in the teacher, and these are largely the methods by which this change in management is brought about.

Then there is another thing: we have to employ so many teachers now that the native ability of teachers, as a class, is not what it was forty years ago—just as the native ability of the clerks employed in the stores, as a class, is not as high as it was thirty or forty years ago. The enormous demand for teachers has more than exhausted the supply of what is called, sometimes, "born teachers." Teachers have not been "born" half fast enough. We are ever so much in arrears for "born" teachers! They say a poet is born, not made; and that has been varied to say that a teacher is born *and* made. And I should add that nowadays we have to employ a pretty large proportion of teachers that are *made* and not born. We can not get

one-eighth of the number we want of teachers of the *born* class. This condition of things makes superintendents necessary; truant-officers necessary; apparatus, and technique, and implements, and examinations necessary. All these things produce pressure, because it takes a good deal of pressure to make a mediocre person do the work of a superior person born to do it, and we have to employ a very large proportion of that class. Then the absence of parental control in the community, the growth of petty lawlessness in our large towns and cities, brings a pressure on the schools. The Police Department informed me that they are always glad when the schools reassemble in September. They have far less juvenile lawlessness than during the long vacation. That is to say, we have made our teachers to some extent a supplementary police force in the community. That is not altogether in the way of lessening the pressure, but in the way of increasing it.

I have come to my third point, and that is the condition of public opinion, meaning you and me. Public opinion, generally speaking, in this particular is ambitious, first of all, and ignorant of consequences, especially relating to schools. That is the tendency of public opinion. It is impulsive and not reasonable; and, especially in the matter of public education, public opinion is extremely unsettled. And this is true not only in professional, but in unprofessional circles. The late Secretary of the Board of Education, Mr. Dickinson, who justly held a very high estimate of his own ability and accomplishments as an educator, thought that when he went to Boston as Secretary he should have a comparatively easy task to persuade the people of the importance of his view of education. After a year of trial I asked him how he was getting along, and he said, "It seems to me the State of Massachusetts ought to offer a premium to any man who will bring two educational experts in this State together who will agree on any one subject with reference to schools!" Well, now, what are you going to do when doctors disagree? when even the highest professional opinion you can reach is not in agreement? You have got to make some choice, and choice always involves a certain amount of mental strain. That is one of the fruitful sources of pressure, the unsettled state of public opinion.

Again, there is the matter of rivalry, or competition, which is brought about by our free intercommunication, and that is a very serious matter. We have grown to feel that each school must equal all other schools, and each city must combine within itself the excellences and advantages of all other cities, and the result is that we tell our pupils that we hear they do so and so in Springfield, or New Haven, or in Boston, or in Brookline, and why can't we do that in Worcester? We can! We can do it in Worcester if they do it in Springfield or New Haven, and can give them a point or two about the way to do it. Or we can do anything that they do in Brookline, and can do a good deal more than they do in Boston; but what we can not do, and what we are continually trying to do, is to unite everything that they do in all those cities and everywhere else on earth! I tell you, in many cases teachers would be better employed cultivating their own ground, doing their own work, than they are when they are sent out and employed as skirmishers to see if they can not find somebody else doing something they are not doing, and, at the same time, keep up with all the rest of the things they are doing. It fills our schools full of things that are time-consuming, and brings pressure on teacher and pupil—this rivalry, this bugbear of what they are doing in other cities, and that we must not be behind, shutting our eyes to our own excellence; and, moreover, it shows that we are wide awake if we do this. It is really quite a serious thing. Then teachers are continually exhorted to do more professional reading and visit schools, and get methods from other teachers. They are running away from their own work, and are not cultivating their own natural abilities, but are continually under a sense of unrest, and a feeling that the only thing to save them is professional reading, or running off to see new methods.

Washington Irving tells us of the bustling old man who was continually calling his servants from their work and exhorting them to be diligent. Now we are doing a good deal of that sort of thing with our teachers, and I do not believe the result is very salutary.

I have already spoken of the displays of what is called "work" in fairs, etc., and of the demoralizing influence of its preparation; and then the inclusiveness—you know, the school system is one of the greatest jumbles that we have in the city. It includes just about everything! Look for just one moment at the days we celebrate—there are Arbor Day, Memorial Day, and all the rest, and then there are any number of birthdays of noted men. And events—current events! I remember, when the lamented death of Garfield occurred, it was brought into the schools, like everything else. It is a terrible thing for the schools when a President dies under tragic circumstances, and I will tell you of one poor little victim of it. He did not know the meaning of it, but he had to learn all about it. Then he had to recite it, and read it, and then he had to write a composition about it after that, and he finally went home and told his mother that he wished the President had not been killed! He had been put through the clothes-wringer so that everything had been squeezed out of him. And there is too much of that done, because the significance of many of these national events can not be comprehended by little children. It is not any particular one of them, but it is all of them combined!

The school gardens: I have here a cutting from the Transcript about an exhibition of gardens; of horticulture, and floriculture, as if we were going to have a wave of gardens! Excellent, and that is the mischief of it. The worst of these things is that they are so good! As the Englishman said of the American pie—the worst of it is it is so nice! This is pie, but it is not so digestible in large quantities. Local discipline, miscellaneous reading, savings banks, art study, excursions afield—and nothing dropped, ever! That is the problem! It is put on top, or jammed in, somewhere or other, nothing displaced anywhere.

Then the aggressiveness of schools is a source of pressure. Most of us learn in boyhood a great many things spontaneously, engage in it voluntarily, or we read this and that, or attend a lecture — whatever we want to do — and, once in a great while, children do that now. But now we feed with a force-pump. Everything must be taught, nothing learned. Now I don't believe that many of you are aware that everything is taught, and nothing voluntarily learned. We must have a *class* in everything. A bright woman member of the Board of Education said not long ago, in the Normal School, that if you went out in the morning and said what a beautiful spring morning this is, the next thing you would know some one would say, "Now let's get up a class and go out and enjoy it!" We assume that a person would not know anything unless he was taught. Now that is not the way we are made. We have a great deal of spontaneous activity. All that is destroyed by this aggressiveness and insisting on teaching things. It will not do to take up a thing in your own way; you are told that you are probably not learning it right, but you join a class and you will be put on the right track. We used to play baseball, and there were a great many things that we used to play. But it has all taken the form of games. A little boy not more than nine or ten years of age, not more than two or three days ago was dismissed from the crowd with curses because he did not show more knowledge of the game of ball they were getting up. He couldn't go out there and enjoy himself. That would not do at all. He would be turned down at once as a perfectly useless and ridiculous member. That is the thing that has infected all of our schemes of education. Our schools are showing far more than we ought to be content to have them show, both in the teachers and pupils—alternation between excitement on the one hand and fatigue on the other, and that easily runs into the morbid condition, and that is especially dangerous to children. Whenever a child is suffering from fatigue, especially

from fatigued attention, many things that we say ought to interest him, entirely fail to do so, and he wishes, as that poor boy did, that Garfield hadn't died, and we are on very dangerous ground for the coming years. I don't know whether there is any remedy for all this; I know that it is nobody's fault but yours and mine. It is the fault of the community. The teachers are not alone; they are acting under pressure themselves. They would not voluntarily bring about this condition of things. It is not the School Committee. It is you and I. It is in the air. It presses upon all sides, and you and I have just as much to do about it as anybody else in the community. If there is any amelioration, I have not shown it; I have given it to you as bad as I could, and have not shown the good side. There are plenty of people who at the next convention will cry up our school system enough. I have thought it would be wholesome to take the other side, and I think it a truthful presentation of a part of the case. I have presented what I consider a very dangerous tendency which the community as a whole is upholding, year by year. If there is any remedy for it, and I do not say there is not, it lies in an awakened public opinion, and secondly, probably, in some modification of the existing school system. And now I am going to make two or three suggestions in regard to some modification of the school system of this city, as shortly as I can, and I won't explain my reasons nor ask you to accept the suggestions.

In the first place, I should like to see the experiment tried of electing our School Committee one third by wards, as at present, one from each ward; one third at large, from the whole city, without reference to residence; and one third by appointment by the Mayor.

This arrangement would do something, it seems to me, towards giving, first, local representation, which we must have with our form of government; second, the advantage of securing our best men without regard to their location or residence; third, for a portion of these men so appointed we could hold some individual responsible, as we can not now.

Second, I should like to see (and I should especially like this if I were Superintendent of Schools in the city or if I were a member of the Committee) a Teachers' Committee of Information or Suggestion, consisting, say, of five members, one from the high schools to be elected by the high school teachers and to represent the high schools; one from the three grammar grades, ninth, eighth and seventh; one from the three primary grades, first, second and third, and one to be elected by the other teachers in the special schools; these to be elected in June to serve for one year and not to be eligible thereafter; to meet once a month for conference, the five, to attend all meetings of the School Committee (except the executive sessions where their own reappointment or salaries were to be fixed), and to communicate with the School Committee, either voluntarily or at the request of the Committee, in writing only.

There are between 550 and 600 teachers in this city, and most of them are persons of good sense and skill and knowledge in their profession. I am speaking of what I know, and it would be of immense use to the School Committee to have some recognized medium of communication back and forth between the Committee itself and the schools more than they have now. That is my point.

Third, I should like to see the retirement of all teachers, perhaps, after twenty-five or thirty years' service, on one quarter of their pay. This would be a relief to the teacher, would be something to look forward to, and it would be a relief to the administration of schools, because there is no more delicate thing to be done, perhaps, by a school committee than to drop a teacher who has grown old in the service, and who may not and probably does not have adequate means of support. This I should do not as an act of charity, but I should do it simply as an act of administration, and I think it would be worth to the service more than the moderate cost to the city. I would not be particular about the provisions, or figures, or age limit; I have only attempted to indicate the point.

Rev. George Sumner Ball.

FOR many a day had a Grand Army man of central Massachusetts been asked to name the veteran whom he most highly esteemed, the chances are that he would reply instantly, "Chaplain Ball." Indeed, in eastern portions of the Bay State, and in such other parts as were familiar to survivors of the Twenty-first, there were few old soldiers of the Rebellion to whom the mention of those two words did not arouse memories in which there figured prominently the solid figure and the pleasant face of him whose remains loving hands carried to their burial on the 9th day of September last. Absence from gatherings which he had been wont to frequent told his comrades that the chaplain was not so active as when he marched with them fully forty years ago; besides, the truthful calendar told them that four score and more of years brought burdens not borne so lightly as of yore.

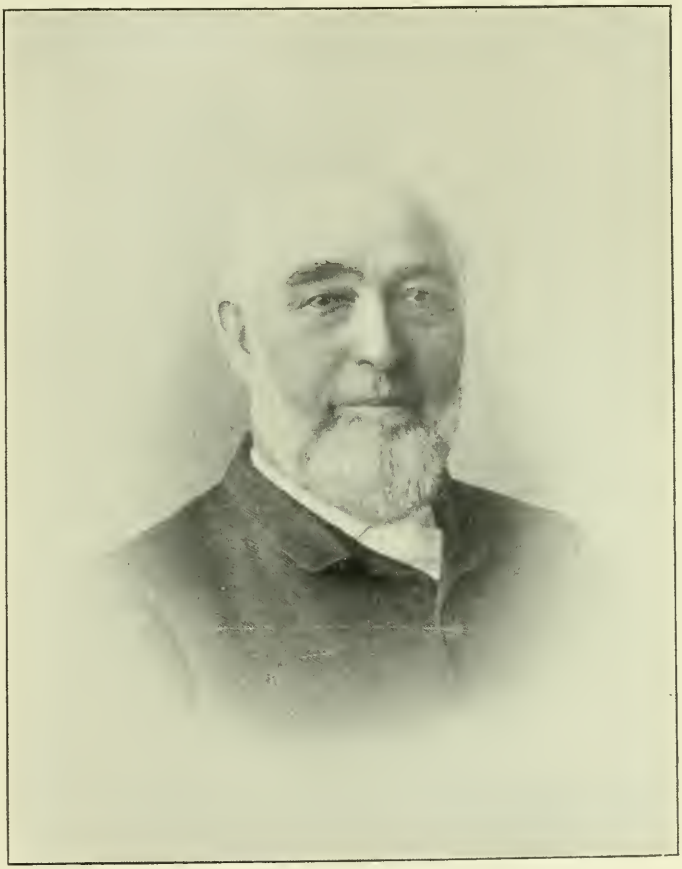
Soldiers of any war need not be told there is a wide difference in chaplains. Whatever changes army life might make in the men themselves, they were especially observant of any departure from the strictest propriety on the part of their spiritual adviser and director; nor were they slow to comment on the same among themselves. A single slip on the part of the officer in black was enough to lose for him all semblance of respect. No more was demanded of Caesar's wife than the soldiers invariably required of him whom authority had set over them to be a counselor in hours of trial and affliction. Roll into one descriptive list all the qualities that a good chaplain should possess, and each and every one could be found in the character of him whom Governor Andrew made the religious friend of every man in the Twenty-first Regiment. He had himself trod the way of difficulties, hence his soul was particularly alive to the needs of those who encountered obstacles.

A native of Leominster, Mass., George S. Ball was born May 22, 1822, the son of Micah R. and Rebecca (Lincoln) Ball, the former born in Boylston, the latter a member of that old Hingham family which gave a general to the Revolution and two governors to the Commonwealth. Micah Ball was a harness-maker by trade, but he found time to take a part in politics, and for ten years was a deputy sheriff in Worcester County; besides, he was the very first man to run a regular stage between Fitchburg and Worcester. To have had a boyhood in a progressive Massachusetts town ought to give any boy a start, but aside from the three R's of the common schools he received little from public sources till, at the age of sixteen, he was allowed by his father to look out for himself. Some of his earlier years were spent in this city working at his harness-making trade, and at least one Worcester gentleman of advanced age mentions with pleasure the fact that the future chaplain had been a fellow workman and boarder in the days of old. One hardly need be told that the young man's energy was not all expended at his bench and that he found time to read and study, thus giving another admirable illustration of the self-help in which New England abounds.

Fortunately for the young man and for us who have profited by his labors, there was in those earlier days in Leominster the Rev. Rufus P. Stebbins, a cousin of the more famous Horatio, himself the pastor of the Unitarian Church. When the Divinity School of Meadville, Pa., was founded and the Leominster preacher was elected to its Presidency, he carried with him, to be a member of its first class, the Leominster and Worcester artisan who at the feet of his instructor drank those cups of knowledge which did their part in mak-

ing him the loved minister and leader of later years. Graduating in 1848 Mr. Ball in the same year became the pastor of the Unitarian Society in Ware, where on Oct. 13, 1847, he had been ordained. Somewhere in these days he had found time to teach school in the Worcester County town of Bolton, and there had made the acquaintance of Miss Hannah B. Nourse, to whom he was married June 18, 1848. In her age she survives him, along with four sons and three daughters. After a stay of two years in Ware, Mr. Ball removed to Upton, and there, except three years given to a pastorate in Plymouth, Mass., he remained to the time of his death. Of course the months of service in the army must be counted out, but there was no severance of the relations so long binding him to the people of his church.

The pastorate of Mr. Ball is a beautiful illustration of the old-time ministry formerly so common in New England. He was settled, and that was enough. No thought of fame or increased salary ever prompted him to seek a new home, and the people, on their part, saw in him their spiritual leader, and never allowed their thoughts to wander to the consideration of younger and perhaps more up-to-date clergymen. Thus they mutually abode till 1896, when the infirmities of advancing years demanded a rest. There are only a few instances anywhere of connections equally long and pleasant in these days of century changing.



REV. GEORGE S. BALL.

Not only did the minister look after things spiritual in his pastorate, he was an active, energetic member of the community at large. No voice was more efficient than his in the town meeting, and upon the School Committee he served long and faithfully. It is just possible that all members of this important part of town and city government do not enter upon their duties with the same devotion to the best interests of the schools that characterized every day of Mr. Ball's service there. With him the School Committee was in no sense a stepping-stone to political preferment. Recognizing his fitness for the position, his fellow townsmen sent their minister to Boston in 1853 as a member of the Constitutional Convention, and the records thereof show that he was by no means a silent member, entering actively into its deliberations. Thus respected and advanced, the War of the Rebellion found the country clergyman, and in 1861 transferred him from the ranks peaceful to those militant.

Some one was surely inspired when George S. Ball was designated for the duties of a chaplain, and how well he performed them let the men of his regiment tell. His ear was ever open to the cry of the distressed, and in every possible way he aimed to make easier the arduous road of the soldier. Though he tried at Roanoke to act only as custodian of such valuables as were intrusted to him, martial ardor overcame his purpose to remain in the rear and, finding faithful hands to retain the confided items, with gun in hand, he pressed his way to the front, cheering the men with Cromwell's maxim, "Trust in God and keep your powder dry." Such a chaplain had an assured place in the hearts of his men, and though his name is not included among the eleven chaplains who lost their lives in the war, he was wounded, and it was the slow healing of the injury which compelled his resignation from his post. However, before he came home he had seen all the service of his comrades down to and through the din and triumph of Antietam, and the first repulse at Fredericksburg. At Chantilly, in the discharge of his duties, he was taken prisoner, but having no use for captive chaplains the enemy soon released him.

Coming back to his home in December, 1862, he was just in time to be made chaplain of the Massachusetts House of Representatives for 1863. It must have been a privilege to hear his prayers during those troublous times, for his voice, ever eloquent, surely rang out with battle fervor. In 1865 his fellow townsmen honored him and themselves by making him their Representative in the House, and for 1866 and 1867 he was the Senator for the district, including the town of Upton. Years afterwards, in 1892, he once more held a seat in the House, and as ever his voice was heard in behalf of every good cause. Temperance, morality, religion, anything which makes for humanity's uplifting, were always sure of his strenuous support.

Though for some months obviously failing in health, he saw very little time when Shakespeare's "Last scene of all" could apply to him. Always alert and active, attending to his own immediate affairs, or looking out for those of his neighbors, it was a common thing to see him in the streets of Worcester, and the glad hand was ever accompanied by words indicating the warmest of hearts. In addition to his own pastoral duties he was a favorite speaker on memorial occasions, and when the armless Sergeant Tom Plunkett died, in compliance with the hero's dying request, his old chaplain spoke his eulogy in Mechanics Hall. Again, when the Boylstons dedicated their battle monument the townspeople secured Chaplain Ball, a grandson of Old Boylston, to give his address.

In 1898, when, on the anniversary of Antietam's dreadful day, Massachusetts sent her Governor and Legislative representation to dedicate her monument Bay State heroism, the survivors of the Twenty-first determined to improve the opportunity to uncover their memorial on Burnside's Bridge. Among the veterans who graced the occasion was the notable form of Chaplain Ball, and it was his to offer the prayer when the assembled multitude awaited the exer-

cises. Even then feeble in body, he was borne up on either side by comrades as he lifted his voice in prayer. All who heard were almost carried out of themselves. The 17th of September, 1898, gave place to that of 1862, and with him who implored God's presence and guidance we saw those devoted men again dash across this very bridge. Here they come, the 51st New York and the 51st Penn., with the 35th and 21st Mass., all ready to do and die, and die they did so many of them. We seem to see the man, now lost in prayer, with the burden of years lifted, again dashing out upon that fiery lane, rescuing some wounded man and carrying back to the surgeon's care, an angel of mercy following hard after the destroyer. There was no one in the array of listeners who did not feel that our chaplain that day, beneath the burning Maryland sun, came very near the throne itself. Later when he was asked to reproduce his words for the pleasure and profit of his comrades who were not present, he replied that while he would be glad to comply it was quite impossible, for he had only a confused idea of addressing the throne of Heavenly Grace, but what he said was known only to his God and those who stood by.

The 6th of September, 1902, had hardly more than begun when the spirit of the faithful preacher and devoted chaplain, ever a gallant soldier of the cross, took its flight. In his later hours, when the mind, wearied with its long duties, wandered, he was frequently heard to ask to be taken home. Lost were all the long years of persistent effort, forgotten all the incidents of peace and war, the circle of life was completed, and as a boy, just where he began, tired with play, he would see once more home and mother. His wish was granted, for the good All Father, hear-

CHAPLAIN GEORGE S. BALL
In War Times.

ing the cry of his child, lovingly bore him away to mansions bright.

Then, when the day of farewells to his mortal frame arrived, Sept. 9th, the town that had known him so well closed its factories, stores, schools, and almost its homes, that every one might repair to the edifice in whose pulpit the good man so long had stood. What a mass of flowers is laid upon the casket! They are from a multitude of friends, and with the starry flag they nearly hide the receptacle of mortality. Banners also drape the pew in which had sat the preacher's family, soon with bowed heads to hear his praises spoken. Long before the hour assigned for beginning, Upton people had filled floor and gallery, all save the space reserved for relatives and comrades. At a little past 2 o'clock p.m., under the touch of musical fingers, from the organ comes a solemn dirge, and to its rhythmic sadness enters a long array of clergymen to whom the dead man had been almost a mentor; next in mourning garb follow the immediate family; then from the vestry come the comrades who had called Mr. Ball their chaplain. They are men of age who are climbing those stairs, not so agile as when they assaulted rebel works at Newbern and Roanoke Island. General Hawkes, Major Harlow, what visions of faraway scenes of strife are ours as these faithful friends of many years march slowly by! Here, too, are his fellow members of J. Orson Fiske Grand Army Post, whose chaplain he had been from the start, and some of them have kept silent guard by his remains as young and old have taken their farewell look at the familiar face.

A hush falls upon us as the Rev. E. L. Mills of the Methodist Church invokes God's presence; then Rev. C. G. Horst, pastor of the Society, rises to read the burial service selected from Holy Writ; the Rev. A. S. Garver of Worcester, in befitting manner, gives a highly appreciative address on the life and virtues of our friend. Happily it can be read in full, as follows:

Words are not needed save to give expression to the sweet and noble memories which crowd in upon our minds. If each one could tell what is in his heart, what a tribute of honor and love and praise that would be to the worth of him in whose life we rejoice to-day. And if all could speak, they would but repeat the same testimony, that he was one of the truest and best of men.

Whatever incident you might recall, whatever scene in which he played his part should come before you, whether in his prime or in his decline, as soldier or civilian, as minister or plain citizen, as public servant or neighbor and personal friend, he was always the same—the brave, genial, faithful, great-hearted, unselfish man, the loyal champion of truth and righteousness, the compassionate friend of his kind, the humble servant of God; and in all his walk and conversation, the meek but shining example of the virtue he taught and the religion he professed.

For more than twenty years, as his ministerial neighbor, I have enjoyed his confidence and friendship. I have known the love and esteem in which he was held by his neighbors and townsmen, as well as in the wider circle beyond his home. I have heard gray-headed men speak of him with tears in their eyes. I have heard the greeting of the old soldiers, his companions in the Civil War, when he came before them on the occasion of some reunion.

Men of all kinds were drawn to him by the force of his character and the attraction of his noble life. They knew there was no guile nor self-seeking in him, and they trusted him absolutely. I suppose few persons in Worcester County entered so completely and intimately into the lives of so many people.

As a minister, it is an ideal picture his life presents. For half a century and more he lived in the same community. His whole rich life was poured out in one place. It was his joy to give himself. He conceived of his office in a large way. Instead of shutting him away from the people, his ministry made him all the more one of them. Whatever concerned them was his concern. He felt that he was about his Father's business when giving help or comfort, or acting as peacemaker, as much as

when in his study or pulpit. Wherever there was a need he could supply with his knowledge or strength or time or patience or good cheer, there he was to be found. His parish had no bounds. He was everybody's friend and counselor. Fifty years of such service endeared him to all, and made him seem part of their own lives. The lapse of time deepened his influence, and he grew old with the respect, affection and veneration of all who knew him.

Nor did these personal relations lessen his share in larger public interests. He was foremost in every good cause; whatever had for its aim the advancement of the community in education, temperance, purity, or civic righteousness, called out all the earnestness of his earnest nature. It is fitting that the heart of the busy town should stand still to-day, its industries hushed, its schools closed, while all that is mortal of him is laid to rest. Happy the town with such a citizen! Happy the church with such a minister! He has left a legacy that is better than all material wealth. The memorial of such virtue is immortal.

If I were asked what was the mainspring of Mr. Ball's life, I should say it was a passion for service. He wanted to be of use in the world, to be a helper of his fellow men. I believe this is what he would best like us to say of him, though he might protest when we placed him in the great company where he belongs, by ranking him with the best of those who "went about doing good."

It was this desire to help that pointed the young man to the Christian ministry as the best field of usefulness, and that enabled him to overcome the difficulties that stood in the way. It was this consecrated ambition, lasting through all the years of his activity, that made his ministry so fruitful, and his life so beautiful. It is said of him, when in the army, that he was untiring in his efforts to secure the punctual delivery of the soldiers' letters. But that was no exception. It is only one instance of what was the habit of his life.

It was this passion for service that in the time of the Civil War made him welcome his appointment as chaplain of the Twenty-first Regiment. What he was in that capacity is one of the noblest chapters of his history. It is written on the hearts of his old comrades, who are here to-day in such numbers. He was there to serve, to serve the men, to serve his country. As a nurse he was tender as a woman; as a soldier, brave as the bravest. They called him the fighting chaplain, because he would seize a musket and rush with the first into the fight. He calmly took his share of the hardships and dangers of the soldiers' lot, and besides he was the sympathetic friend and companion and helper of every one. When I hear of his unwearied attentions to "the boys," and of his little thought of himself, how brave and cheerful and hopeful he was, what courage he inspired, what comfort he gave, a presence of cheer in the camp, an angel in the hospital, the stainless knight in the field, I do not wonder that he was one of the best beloved chaplains of the Civil War. The honor and veneration which he inspired nearly forty years ago have grown stronger with the passing years. I do not wonder that his old comrades should come long distances to-day to show their appreciation and gratitude.

The religion of this valiant man of God was as simple as his life. There was no pretence, and nothing ecclesiastical about it. It was as direct and serviceable as that of his Master.

> His armor was his honest thought,
> And simple truth his utmost skill.

He was firmly attached to the Unitarian household of faith. He was devoted to the church, and to the Worcester conference, serving the latter for many years as its Vice-president. But the holy Catholic church was none too wide for his sympathies, and men of all creeds recognized in him the true Christian. The gospel of good-will incarnated in such a life has currency everywhere, and is honored by all.

And as a man how genuine and unaffected he was! What kindliness beamed from his countenance, what heartiness vibrated in the tones of his voice! How tender and thoughtful in the home circle, how resolute in the path of duty! How forgetful he was of self,

how considerate and generous in his thought of others! What a wise adviser, what a devoted leader! Who could bear so patiently with infirmities, who so willing to think for the thoughtless, who so quick to bring help to those in any kind of distress, who knew as he to bind up the wounded heart and pour in the oil of consolation, who possessed in fuller measure that greatest of the Christian virtues, which "suffereth long and is kind, beareth all things, believeth all things, hopeth all things!" He was one of those "gracious men," renowned of old, whose righteousness shall not be forgotten. With their descendants shall remain a good inheritance. The people will tell of their wisdom, and the congregation will show forth their praise.

He was a consecrated man. He walked with God. He lived for the good he could do. He was an honor to his calling, and a blessing to his fellow men. The world is better that he has lived in it. Our own faith and hope grow stronger when we think of him. His life was full and complete, and it has not come to an end. We believe it is just begun. We come here to-day, not to lament, but to revere his memory, and sing hymns of praise for the blessing of such a life.

Calmly, calmly lay him down!
He hath fought a noble fight,
He hath battled for the right,
He hath won the fadeless crown.

Memories all too bright for tears,
Crowd around us from the past;
He was faithful to the last,
Faithful through long, toilsome years.

All that makes for human good,
Freedom, righteousness and truth,—
These the objects of his youth,
Unto age he still pursued.

Hoping, trusting, lay him down!
He hath fought a noble fight,
He hath battled for the right,
He hath won the victor's crown.

The speaker who followed Mr. Garver evidenced in face and figure a long journey along life's pathway, and well he might, for the Rev. Rush R. Shippen of Brockton had been a fellow student with Mr. Ball at Meadville, and is now the sole survivor of the first class, that of 1848. It is a tender tribute that the friend of his early days pays to the man whom we all revere, and most eloquently did he weave into his story the recollections of long ago. The choir is composed, seemingly, of very young singers, and how the voices of youth chanted in memory of age! Their first hymn was, "Feeble, helpless, how shall I learn to die?" Next a fellow Upton pastor, the Rev. A. A. Wiswell of the Congregational Church, spoke of his association with the deceased; though separated by denominational boundaries they were fully united in the stronger bonds of Christian fellowship and love. The Rev. C. A. Staples of Lexington, who follows, is a native of the near-by town of Mendon and for many years he has been an intimate friend of Mr. Ball; it is his to emphasize the work performed by the deceased, whom he characterized as one of the last of the old-fashioned pastors, words most appropriately spoken. "He Leadeth Me," sung by the choir, seemed to place the hand of our friend within that of his God, and with the benediction by Pastor Horst, we filed from the meeting-house, taking a final look at features till now wont to be wreathed in smiles.

When the chaplain's comrades next would stand near his body, they must visit Upton's Maplewood Cemetery, in which that day his grave was made.

The Southern Workman from Hampton, Va., has the best presentation of work among the colored people and Indians that comes to the Board of Trade table. It is statistical, historical and pictorial. Negro literature and illiteracy is one of the most notable of its contents. The magazine is, easily, the most comprehensive and progressive of all publications under the direction of colored people.

WORCESTER INDUSTRIES

VI.

The Making of Corsets.

FACTORY AND MAIN OFFICE.
Royal Worcester Corset Co., Worcester, Mass.

IN the Heart of the Commonwealth there are probably as many, if not more, diverse manufacturing interests than in any other section of similar size in the United States. Worcester proper has rapidly forged ahead in this particular direction until it is considered now as one of the great manufacturing centers of the world.

Many of her industries are nationally known, but none more so than that of the Royal Worcester Corset Company.

By virtue of strictly first-class manufactured products placed before the people during the past forty years, the reputation it has attained is such that this Company stands among the leaders in the manufacturing field.

The illustrations accompanying this article serve to give a fair idea of the environments of Royal Worcester corsets.

The story of the growth and development of this Company may be summed

up in the terse but expressive quotation, "Eternal vigilance is the price of liberty." Established in 1861, the business has been conducted ever since by Mr. David H. Fanning, who is now its chief executive; and owing to his indomitable push and untiring energy, coupled with a supreme confidence that good merchandise must always find a ready market, he has developed a business upon which the sun never sets, the products of the Royal Worcester Corset Company being sold all over the world.

REAR VIEW OF FACTORY, SHOWING SECTION OF PARK.
Royal Worcester Corset Co., Worcester, Mass.

The Company's factory, which is situated on the block bounded by Wyman, Hollis and Grand Streets, is probably the finest factory of its kind in the United States if not in the world. It would be difficult to conceive of a more admirably constructed manufacturing plant. Modern ideas as to the economical conduct of a large business have been brought into play as far as human ingenuity could devise. Every sanitary condition known to architecture which is applicable to the prevailing conditions has been adopted. The problems of light, ventilation, heat and perfect sanitation have all been successfully applied; and the 1000 men and women who spend their working-day within the walls of this magnificent building are as comfortable and as healthy as they would be in their own homes.

The ventilating system is one which has received a great deal of attention. The fresh air is taken from the outside and distributed through the building by means of an immense rotary fan after having been heated over a system of steam coils, thus giving to the entire building pure but warm air during the coldest of weather, this in turn being

taken off at ventilators throughout the building provided for the purpose.

The building faces the east, and until the sun is in the meridian, bright morning sunlight makes every work-room cheerful. On the west of the building is a beautiful park, where fragrant flowers and handsome landscape gardening can be seen from every working-place in the factory. The theory is admirably demonstrated that better service is gotten from an employee when environed with health, cheerfulness and pretty surroundings.

Attention is called to the view of the dining-room in this article. This dining-room is approximately 150 feet long by 80 feet wide. In it each day upwards of 500 young ladies take their mid-day meal. It is equipped with substantial tables, properly covered; and its floor, which is of inlaid Italian pattern, as well as its glazed tiling sides, are kept in an immaculate state of cleanliness. Steam ovens for heating the lunches, sinks for the proper cleansing of the dishes, complete lavatory arrangements, are all provided; and the Company furnishes the help with all the very best literature of the day, which is constantly on the tables of the dining-room for the literary enjoyment and intellectual development of its help.

DINING-ROOM DURING THE LUNCH HOUR.
Royal Worcester Corset Co., Worcester, Mass.

The main building of the Royal Worcester Corset Company is 260 feet long and 52 feet wide, five stories in height. There are ells at either end, the Wyman Street extension being nearly 150 feet long, and the same height and width as the main building. A spacious steam

and electric plant, entirely separated from the main building, containing the boilers and engines, sets immediately behind the main building and in front of the park.

The buildings are all admirably equipped with fire-escapes, and in either end are iron and brick towers and stairways for quick exit in case of danger. The entire factory is practically fire-proof. The insurance men of the country consider it one of the very best risks known in the manufacturing world. The floor over the stock-room, which occupies the entire first floor of the main building, is built along the lines of the deck of a ship, that is, sloping upwards from either side toward the centre of a gentle arc.

The plant is entirely equipped with the automatic sprinkler system, and if fire could possibly occur on the upper floors the water would be checked at the roof of the first floor and thrown off into gutters at either side, which would carry it away. This floor being water-proof, makes it impossible for the stock to get wet from fire in the building. A complete electrical thermostat fire-alarm system connects directly with the city Fire Department headquarters. Automatic fire doors will close themselves the moment a certain heat attacks them; and this would prevent the spreading of the flames from one room to another.

SECTION OF PARK.
Royal Worcester Corset Co., Worcester, Mass.

The Company's offices are conveniently located on the first floor of the Wyman Street ell, and are as complete as they could possibly be made. The entire suite of commercial rooms is fitted in quartered oak with hardwood floors, and a handsome arrangement of grill-work divides each working-room from the other. The private offices of

the President and Treasurer occupy a position overlooking the park, and are conspicuous for their comfort and unostentatious beauty.

The view given in this sketch of one of the stitching-rooms will give some idea of the immensity of the work-rooms which are given up to the manufacture of Royal Worcester corsets. In this sketch are very nearly 700 women and girls at their work, and in the room are about 500 sewing-machines all running by power; and this is only one of the great working-rooms of the building.

Branch offices of the Company are located in Chicago, Boston, New York and San Francisco.

The Company's salesmen cover nearly all portions of the western hemisphere, and its goods are now being sent all over the world.

To sum it all up, the success of the Royal Worcester Corset Company and its manufacturing products is due largely to the untiring energy of its executive, ably seconded by a competent corps of assistants, and the splendid business system developed, also in a very large measure to the fact that its goods have always been of the very highest quality and given to the people made upon honor.

Worcester may well be proud of such an institution as the Royal Worcester Corset Company.

ONE OF THE MAIN STITCHING-ROOMS.
Royal Worcester Corset Co., Worcester, Mass.

Partisanship and Municipal Parties.

By T. St. Pierre.

"TO divorce city elections from the old political organizations it is necessary to consider some other division of forces," says a writer in the Worcester Magazine of March, 1901. Thereby hangs the great difficulty which advocates of independent action in municipal affairs have to face. As the same writer gives us to understand, the ordinary citizens' movement is not a force to be relied upon. The reasons thereof are many. In the first place, the citizens' movement is not infrequently a ruse by which those who find themselves in a hopeless minority—sometimes a regular party organization, and sometimes a few disappointed individuals—seek to seize power with the sole purpose of profiting by the advantages which power brings. When such a state of affairs exists we find ourselves with a nameless combination which is infinitely more dangerous than a regularly constituted party. The record of a political party is hung up before the eyes of all, and its opponents may be trusted to call attention to the spots in it; the party men are known, branded, and in a general way held responsible for all that the party has done. A mere combination is like the snake of the poet—it can throw off its sin-stained skin at will; it is ever shifting and changing; the members concoct their schemes in secret conclaves, and alone know the ties of common interest which lead them to covertly assist each other in times of need; they remain free to deny the existence of these bonds and to disclaim mutual responsibility. The writer can state from personal observation that the members of a certain ring who claimed to be acting on non-partisan lines, but who could always be depended upon to stick together when it came to clinching a big deal, made a point of frequently assailing each other in public to confuse the uninitiated voter.

Again, if the citizens' movement is an honest one, such as is aroused by the necessity of putting an end to a particularly bad administration, it is liable to fail for mere want of organization. To secure a majority of the votes it is not sufficient to be right, as every one knows; it is necessary to educate, to awaken the apathetic crowd. To do so, there can be nothing so effective as what we have come to recognize as the machine, the grouping of men having experience in the art of influencing their fellow men, used to working together, knowing each other's aptitude, and inspiring mutual confidence. Such machinery cannot be created in a few weeks for the service of any cause, while the honest citizens' movement is essentially spontaneous. Even if the wave of popular feeling be so strong as to triumph over a regular organization, possession of power does not prevent public interest from lapsing after a brief period; the disinterested men who have helped to create the agitation withdraw, feeling that they have done their share, and the self-seekers are left at the helm.

It being admitted that a regularly constituted party has the advantage of position over a group of citizens temporarily brought together to accomplish a special object, it may be asked: Why should the managers of a national political party wish to dominate in municipal affairs? And if they must extend party allegiance to this sphere, why do not parties give as good government in municipal as in national affairs?

Theoretically there is no reason on which the man entrusted with the national party machine in a certain locality should meddle as a party man in its municipal affairs. But it is in human nature for one who commands a certain influence to make himself felt

wherever possible. There are practical reasons which militate against quiescence. A municipal office may be the means of keeping before the public eye the name of a man who may become a formidable opponent in national politics, and it is the part of the far-seeing machinist to preclude such a contingency. Hence also the desire of the intelligent politician to keep out of the public mind issues which, although not related to national politics, would tend to weaken the party discipline and force of cohesion. There are other reasons of even a less lofty nature which impel the vulgar boss to use the party machinery to serve personal ends.

And when the machine politician affiliated to a national party goes into municipal politics, though he may be a man of the better type in his class, we must bear in mind that he considers the interests of that party as a national organization above all things. In the choice of candidates, in conducting the campaign, and later in advising his friend in office, the thing he asks himself is not: "Is this for the best interests of the people immediately concerned?" but, "How will this affect the chances of the party in the nation?—will it be conducive to harmony, or will it disrupt the organization upon which partly depends the triumph of the principles of free trade or protection, mono-metallism or bi-metallism?"

Looking at it from this point of view one can conceive how statesmen who play an honorable part in the political life of the nation are led to tolerate, nay, to support for municipal office, men whose only merit is to do effective work for the party in national contests. We have also an explanation of how it is that the Mayor of San Francisco may truly say: "It has been demonstrated with us in the past that party responsibility or discipline, which should compel a proper administration by candidates, is so vague and shadowy that it accomplishes but little." The explanation is that the parties are national parties, which go into local elections without much regard for local considerations, which deliberately subordinate municipal questions to national issues. These parties have repeatedly shown their disposition in this direction in an unmistakable manner by abridging the right of the people to local self-government whenever their interest commanded it. That is a serious, a very serious condition of affairs, and one may even wonder that it has not led to even worse results than we have now seen. But to get away from it we must provide "a new division of forces." For reasons already adduced, the ordinary citizens' agitation can not contend successfully against the influences which bring national political organizations into municipal contests. Some say: "Extend the principles of civil service reform to the municipal administration." That is excellent advice as far as it goes, but it does not apply to the legislative branch of government, nor to the chief officials elected by the people. Others again say: "See to it that good candidates are nominated at the caucuses." That is also excellent, but it is not true that good men alone are sufficient to ensure good administration. A long list of men could be drawn who came into public life with an excellent business record, whose motives were never impugned, and who brought into their administration ideas extremely distasteful to the majority of the people, even positively injurious to the community's advancement.

Good government implies stability as well as honesty, foresight and continuity of policy as well as stringent supervision of details. That can hardly be expected if every second year the direction of affairs is entrusted to new men without a political past and without practical experience. To ensure stability you must create regular party organizations, having settled traditions of conservatism or radicalism, fighting under recognized leaders representing well-defined ideas. This organization is necessary to retain valuable men in public life; it is necessary to secure a thorough and persistent agitation on public matters; it is necessary to simplify the issues and to make them clearer to the voter's mind on election day, and it is necessary to curb, in as far as possible, by inspiring a spirit of

fealty, the popular disposition to jump at every new fad and to put heroes of a day in office.

But the parties must be municipal parties which will make municipal affairs their sole care instead of degrading municipal offices by playing them as small cards to secure a great stake. Why should the organization of such parties be impossible? There are not wanting in the sphere of municipal politics issues of sufficient importance to arouse the interest necessary to the existence of a party, and complicated enough to divide the two great groups of men: those who are always looking backward, and those who are always looking forward, the contented and the discontented. All we need is to break away from fallacious traditions and the whole people will see that it is just as foolish to say of the members of a national party that they are in honor bound to vote together on a municipal issue as it would be to say so of the members of a church. And when a real municipal party exists, party responsibility shall cease to be a mere shadow.

The Legislature could do much to hasten the new departure without going far from accepted principles of legislation. We have now on the statute books laws intended to divorce municipal from national politics. We have laws regulating the manner of nominating candidates. Why should we not have a law providing that no organization nominating candidates for municipal office shall use the name of a party having had a ticket in the national or state election, and that no platform on which such candidates are nominated shall contain any reference to national and state party platforms?

It can be reasonably expected that such a law would soon create a universal public sentiment in the direction of the much-needed separation of powers.

September Magazines.

The National Magazine for September has its accustomed variety of contents. First, we are introduced to a large number of distinguished men, whose faces it is pleasant to greet, though the people themselves will not know us when we meet them. Washington, as usual, comes in for a general skimming, and naturally we have a governmental theme next from Senator Lodge, a treatise on Philippine civil law, etc. Every page is replete with interest.

Sunset makes its transcontinental visit to give eastern readers most delightful glimpses of the far-off Eldorado, and each page awakens a desire to flee away from these Atlantic scenes and, with our western brothers, hunt the mountain goat, journey in Mexico, roam through the virgin forests of California, hear the same Angelus which stirred the genius of Bret Harte to poetic fervor, and to inhale the inspiration which comes from Pacific sources.

The Royal Blue again comes from Baltimore laden with war-time memories, accompanied by the very best map yet published of the section over which the main fighting was done forty and more years ago. Once more Col. A. K. McClure opens his volume of recollections and tells the story of the Rebellion as he saw and heard it. It is an aged face, pathetic in its deeply cut lines, which looks out above the heading, "I fights mit Sigel," almost the last of the famous generals produced by the great struggle.

The Four-Track News affords its unvarying feast of good things, and its artists find in the vast extent of New York's resources scenes to rival those of remoter lands. Whether it be the Adirondacks, Niagara or the Rockwood Pottery, Santa Fe, or among the Esquimaux, the zest of interest is always maintained. The old New Yorker, wherever found, will delight in these subjects for the memories they awaken; those not to the manor born will take equal pleasure through a realization of what a single state in this nation can produce.

Street Paving in Worcester.

By An Expert.

Since the last article on the subject of street paving in Worcester, we are pleased to note that considerable has been done in the way of improving Worcester streets, and soon Worcester, if the improvements in streets be kept up, will rival any city in the country. Not only are the residential streets being looked after, but also Main Street, in the centre of the city. It is with a great deal of pride that we record the progress now being made.

There is now almost completed on Main Street the latest and best granite block paving possible to lay. Of the durability of granite block there can be no question. As to its desirableness, so far as its life, price, maintenance, durability, adaptability for horses and sanitary qualities, all these have been considered in a previous article. Its durability can not be questioned for such heavy traveled streets as Main Street, but of the other qualities above enumerated it possesses more disadvantages in being noisy, dusty, liable to absorb filth, hard for horses to draw loads on, cost and maintenance, than some smooth pavements now in use throughout the country.

MIXING-PLANT ON CANTERBURY STREET.

One of the latest pavements to be laid in Worcester, the bituminous macadam waterproof pavement, which is now being laid on School Street and South Main Street, we believe will develop into the best possible pavement. It is certainly less noisy than other pavements, is not slippery, is waterproof, easy

to clean and repair, not liable to crack or disintegrate according to the opinion of all the most eminent engineers and street superintendents in the country who have expressed an opinion after looking into its construction. Before the City Government, including the Mayor, Superintendent of Streets, and City Engineer, decided on laying this pavement, a thorough investigation was made by the city officials into the merits of the pavement as laid in various cities where it has been in use. That investigation consisted of interviews with city officials, members of the Fire Department, and teamsters during actual visits to the several cities. The bituminous macadam waterproof pavement is the result of many years' practical experience by its inventors. It is a combination of the principles involved in the building of the best macadam and asphalt streets. The disadvantages of the forms of pavement heretofore in use are as follows: The asphalt pavement is considered too slippery, liable to disintegration, and expensive; the brick pavement is noisy and slippery; the

SCHOOL STREET, BEFORE PAVING.

stone block objectionable on account of its roughness and noisiness, and like asphalt and brick it is too expensive. The unanimous testimony of those who have used the bituminous macadam waterproof pavement is that it is exceedingly pleasing to drive over, affords a sure and safe foothold for horses, and is easy of traction. It is waterproof, and therefore will not absorb filth of the street. It is durable, easy to clean and keep in repair, and will not crack nor disintegrate.

The principle of laying the pavement appeals to common sense; in fact it has been oftentimes referred to as the "common sense" pavement. The street to be paved is excavated to the required depth, this depending on the thickness of the pavement, which is determined by the average weight of traffic to pass over the street. The sub-foundation is thoroughly rolled with a heavy steam roller until it presents a perfectly firm, unyielding surface. On the sub-grade is laid the base of the pavement of crushed stone, which is rolled until so thoroughly compressed that the stone ceases to creep under the roller. On this foundation is then poured a coat of flexible bituminous cement, the purpose of this being to prepare the stone so it will adhere to the hard cement of the second coat. The second coat of a very tough bituminous cement is then poured on the base, and this binds the foundation stones firmly together, and also serves to cement the wearing surface to the foundation. Upon this base is placed the wearing surface, which is composed of crushed stone of varying and predetermined sizes and proportions to give the greatest density, and it is in the selection and mixing of these materials, and the manufacturing of paving compositions that the life of the pavement depends. Actual experience in this

HANCOCK STREET, BOSTON, PAST MASSACHUSETTS STATE HOUSE.

class of work by the contractors is requisite to secure the best result.

Before beginning operations in any city the construction is determined after a laboratory examination of all available materials which are suitable for the purpose. If local materials are not suitable the grades required are shipped from other points, and the varying conditions in the several streets have all to be taken into consideration. The mixing of the wearing surface is now being conducted for South Main and School Streets at the portable plant located on Canterbury Street. Nothing depends upon the memory or skill of the laborer. The handling and mixing of the various ingredients is an automatic operation. The mineral ingredients are taken into the dryer at the plant and carried through the various stages and measured in proper proportions of each size into the mixer, where they are thoroughly incorporated with the paving cement, and delivered to the carts which carry the material to the street. The materials are not touched by hand from the time they are delivered to the dryer until dumped on the street ready for the roller. The surface mixture, while hot, is spread on the foundation to the proper thickness, and rolled until thoroughly compressed with heavy steam rollers. After the surface of the street is laid and rolled hard, hot trap-rock screenings of about one-half inch diameter are thoroughly rolled in, thus presenting a gritty surface as a foothold for horses. As a safeguard that only the proper mixtures are used in the work, samples are sent daily to the laboratory of the contractor for careful analysis, both as to the proportions of the several sizes of the mineral material, and of the bituminous cement. This affords a check on the mixture, and insures

MAIN STREET, NEAR GRAND, BEFORE PAVING.

the proper following out of the laboratory instructions by the workmen.

The appearance of the street when newly finished is like that of a macadam roadway. Under traffic the street gradually assumes the appearance of an asphalt street, although it always affords a gritty surface and consequently a perfect footing for horses. The city of Worcester, in adopting this form of pavement, which, by the way, is owned and covered by letters patent by the Warren Brothers Company of Boston, Mass., is keeping well abreast of the times, for the same pavement is now in use in eleven out of thirty-three cities in Massachusetts, as well as in Norwich, N. Y.; Norristown, Penn.; Nashville, Tenn.; Newport News, Va.; Tacoma, Wash.; Rome, N. Y.; Cleveland, Ohio; Duluth, Minn.; South Brooklyn, Ohio; Port Huron, Mich.; Newport, Ky.; Manistee, Mich.; Huntington, Ind.; Watertown, N. Y.; London, Ont.; Conshohocken, Penn.; Harrisburg, Penn.; Saginaw, Mich.; Bay City, Mich.; Montpelier, Ind.; Yonkers, N. Y.; Salem, N. J., and Pawtucket, R. I.

The Massachusetts cities in addition to Worcester which are using the bituminous macadam pavement are Boston, Brockton, Cambridge, Holyoke, Lowell, Lynn, New Bedford, Taunton, Nantucket and Everett. Most of these cities used it last year and ordered more this year, which fact is the strongest evidence of its worth.

It is hoped that the citizens of Worcester will take advantage of the opportunity afforded them by the City Government to satisfy themselves of the merits of this modern pavement, as there seems to be a general feeling that street improvements should be carried on extensively in the near future until the city shall have a reputation for good streets well abreast with its progress in other lines.

In the November number of the MAGAZINE will appear cuts of Worcester streets after receiving the bituminous macadam waterproof pavement.

BROAD STREET, NASHVILLE, TENN.

What People Might Think.

"From gold to gray
Our mild sweet day
Of Indian Summer fades too soon."
Whittier.

EVEN Indian summer is a boon this season. The oldest inhabitant is quite unable to recall a counterpart. Very likely, however, this failure arises from the fact that he has not preserved thermometric and barometric figures. In spite of apparently great rainfall and abnormal lack of sunlight the aggregates from year to year seem to foot up about the same, at least in these parts, though there are sections of our land where coal is not the only essential that is lacking.

AT present the great cry among laboring people, and for that matter among all, rich and poor, is not wherewithal shall we be clothed, but rather how shall we keep warm during the coming winter months? The question of municipal ownership of public utilities has been discussed in these columns at considerable length, both for and against. Would it not be timely to consider how long private greed, whether of capital or labor, ought to be allowed to inconvenience the public at large? There are many reasons pointing to the desirableness of placing fuel along with water under governmental control.

AS the pages of this number of the MAGAZINE are read, the first class in the academic department of Clark University is assembling. These beginners have the responsibility and the honor of originating the customs which will prevail for years to come. It is eminently desirable that they begin well. Careful leadership in the so-called non-essentials of college life is quite as desirable as instruction in the essentials. A college in the midst of a large city is likely to take on habits entirely at variance with those of a village institution, and what the class before did is sure to have its weight in what the following classes will undertake.

MANY a long day passed ere the Worcester Tech began to take on anything like college ways. The students were scarcely more than high school boys and the discipline to which they were subjected was much like that of the schools whence they had recently come. After a long time there were added chaptered secret societies, thus admitting the young men to fraternity life, class suppers became an institution, graduation assumed larger importance than formerly, and the annual commencement season has taken on a dignity hardly dreamed of when the head of the institution was known as the principal. Still, from the onset, the pace for regular, routine work has been so fast that few of the students have found time for anything outside of constant, undeviating "grind." For only one year has there been any attempt at dormitory life, which, with all its defects, sustains a great deal of charm and real merit. Friends of the Tech are hoping that the experiment of Newton Hall may be repeated on a larger scale on some one of the elegant sites still uncovered near the Institute.

THE removal of an established industry from this city to the West brings up a train of reflections that are pertinent. It seems that a building is erected, all of the stock hitherto untaken is subscribed for, and possibly some concessions are made in the way of taxes. On what sort of foundation is business based when such inducements are held out? Some one must work to erect the factory. Some-

body's money takes up the stock. It is the property of others that pay the taxes. Any one can manufacture at a profit so long as all the expenses are borne by the other fellow. But all the inducements are held out that when, well planted, the money so invested will come back in wages and taxes to be imposed sometime. When that time comes, what is to hinder the industry's folding its tent and, like the Arab of verse, stealing away to some other place which, for another dose of moonshine, is ready to repeat the experience of all places that have gone into the "inducement" business.

THERE are empty shops and factories scattered all over this State which are lasting monuments of the folly of trying to locate an industry where facilities for transportation and accessibleness are wanting. Extra cost of getting in or out is met for a time from the amounts raised by subscription, but when the bottom is reached then comes the inevitable collapse. No matter what the number of years the enterprise has been running, it will remain no longer than it receives its regular bolstering. Locomotion is entirely too easy in these days of cross-country railroads to expect a losing business to continue long after its profits cease just for the sake of sentiment. There is a legitimate field for boards of trade to labor in. It is theirs to set forth the desirableness of their respective locations in respect to railroad facilities, church and educational advantages, but when it comes to hiring business to locate they should have none of it. As one hard-headed manufacturer said when asked to contribute towards buying a peripatetic industry, "No, sir, not one cent. I located here because I thought it to my advantage, and the way is open to others under the same circumstances." Worcester is ready to greet any good business, not to buy or hire it to come.

DURING the early days of October Worcester ears are tingling with the delights of "linked sweetness, long drawn out," in other words with their annual treat of music as afforded by the Festival, which for so many years has added to the city's reputation for aesthetic culture. Though other places have undertaken the same or a similar scheme, something has always been lacking to secure the coveted success which for so long a time has crowned Worcester's efforts. Just when the foundation was laid it would be difficult to tell, but the chances are that the public schools have had most to do with the popular ability to maintain our unrivaled chorus, and to inspire the taste which responds to musical effort of any kind. Barnstorming aggregations have no place in Mechanics Hall. Indeed, so critical has the city grown that the best of preaching can not compensate for indifferent work in the choir. School girls look reprovingly at traveling prima donnas and note with reprobation an errant flat, wholly unheeded by the average listener. Schools, chorus-drill and memories of Carl Zerrahn combine to keep Worcester in the front ranks of festival admirers. Nothing in New England brings to any one of her numerous cities so many strangers as this one week of song attracts to Worcester. It is the annual culmination of musical effort which reflects the utmost credit upon all concerned. Those who planted and fostered the earliest gatherings have passed on, but their work continues. The hall in which the regular concerts are given has become as well known as any structure in the State, and few soloists of either sex do not consider it an honor to appear in Worcester Festival. We may never attain the reputation which will ever cling to Bayreuth, but we may safely say that our artists have done much towards popularizing the work of the master, Wagner. After all, is it not a little interesting that Worcester's repute should rest so largely on music and mechanics?

WORCESTER BOARD OF TRADE

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Board of Trade Notes.

At the Directors' meeting Sept. 18 a communication from the Immigration Restriction League was referred to the Committee on Legislation. It was decided that an association be formed, known as that of the Board of Trade, for the benefit of the members, to be called "Advertisers' Protective Association;" this course is taken to head off the numerous schemes which are constantly presented, nominally for the good of certain societies, really to line the pockets of promoters. Thousands of dollars are thus annually paid out by the charitably inclined, very small parts of which reach those in whose behalf the solicitation is made. Several lines of trade in Worcester have already taken this action, and the course of the Directors is to extend and multiply its advantages.

The Skagway Chamber of Commerce presents an appeal to the business organizations of the country to help in securing for the people of Alaska more liberal treatment at the hands of the government, since at present they have no voice nor part in legislative affairs:

Whereas, the District of Alaska possesses many and varied resources of natural wealth, including vast areas of untilled agricultural lands, undeveloped mineral belts, great fishing banks, and forests of valuable timber extending over extensive scopes of wilderness that upon the enactment of liberal legislation will teem with industry;

That the government collected in licenses last year exceeding $235,000 more than had been appropriated for the improvement and needs of that country;

That the system of taxation by license is unjust; adverse to all precedent, and inconsistent with the principles of the government of the United States;

That no laws exist by which title to land for the settler can be obtained;

That the people of Alaska have no representation or voice in Congress, and that the laws provided for Alaska are vague and inadequate, and many of them were enacted to meet past conditions:

Resolved, That Worcester, Mass., Board of Trade hereby memorialize the Congress of the United States to speedily enact liberal laws for the District of Alaska, to open the land to settlement, and the mineral wealth of that district to the industry of the United States;

That such aid be extended as may be neces-

sary to the construction of wagon roads, railroads and telegraph lines;

That its numerous hardy, industrious and intelligent population may be represented in the halls of Congress, and that the Alaska license law be repealed or amended so that the revenue derived therefrom may be disbursed for the needs of the District and by the people of Alaska.

The subject of a building for the Board of Trade was introduced by President Blodget, and a communication was received from H. H. Bigelow offering a site on the rink land, between Foster, Commercial, Mechanic and Norwich Streets. A building owned or controlled by the Board of Trade would undoubtedly serve to solidify the organization, and, if public spirit would rise to the occasion, it might be secured. Such an enterprise would be a safe investment if well located. This matter was referred to the Ways and Means Committee, which committee will investigate and report at the next meeting.

Friday evening, Sept. 26, the first smoke talk of the season was given by E. St. Elmo Lewis to the members of the Board of Trade on the subject of "Business Getting—the Master Problem."

Upon invitation of D. H. Fanning, President of the Royal Worcester Corset Company, a party of thirty-five directors and members of committees of the Board of Trade visited the model corset factory on Tuesday, Sept. 16, spending three hours inspecting the plant. As the factory is described and illustrated in this issue, any further description of the visit would be unnecessary, except to state that a unanimous vote of thanks of those present was extended to Mr. Fanning and his associates for their kindness in showing the factory, and for the excellent lunch served in the new dining-room. Noticeable features of the visit were the politeness and intelligence of the young women and girls employed, and it was the sentiment of the visitors that the light, clean and well-ventilated rooms, together with the beautiful lawn and flower gardens surrounding the factory, have much to do with the production of high class goods.

Industrial Notes.

[This section of the WORCESTER MAGAZINE is open to all industry promoters in this city, and notes are urgently solicited. Cuts of new machines will be inserted on request.]

A new departure in the industrial life of Worcester is to be the Worcester Dairy Company. George R. Bryant, who, for the last twelve years, has conducted a successful milk business, handling the milk from the well-known dairies of the Green Hill, E. P. Curtis and W. C. Curtis farms, has associated with him Edward Bigelow, who is well known in Worcester and has had a long experience in the dairy business.

The Worcester Dairy Company will be located on the corner of Bigelow Court and Mechanic Streets, and will have the latest improved machinery for handling milk.

Bottles and cans will be washed and sterilized every day before filling to insure absolute cleanliness.

Pasteurized milk, which has become so popular in other cities, will be a specialty.

A full line of milk dealers' supplies will be kept and the surplus milk will be taken care of.

A choice line of butter and eggs will be offered for sale.

The members of the Board of Trade and the public are invited to inspect the plant, which will be open October 1st.

George H. Cutting Company, contractors and builders of this city, are to erect a 20,000-spindle mill for the Woodside Cotton Mill Company, Greenville, S. C. It will be built of brick, 308x130, five stories high, with the entire equipment. Houses for the operatives will also be built by the Worcester contractors.

W. C. Healy, who was burned out in the Day Building fire May 21st, has relocated his electrotyping and engraving plant in the Mawhinney Building, 19 Church Street, where he is to occupy the top floor. The latest and most improved machinery for making electrotypes has been purchased, and in order to have the best has delayed starting in his new quarters. The building has been renovated, and he is well located to serve his patrons.

NATIONAL BANKS.

CITIZENS' NATIONAL BANK, 342 Main Street. Incorporated as a State Bank in 1836; as a National Bank in 1865. Capital $150,000; surplus $84,000. Dividends April 1 and October 1; rate past year, 6 per cent. President, Henry S. Pratt; Cashier, George A. Smith; Directors, Henry S. Pratt, George B. Buckingham, Samuel E. Winslow, John C. MacInnes, William H. Crawford, Burton H. Wright, Herbert Parker.

FIRST NATIONAL BANK, 474 Main Street. Incorporated in 1863. Capital $300,000; surplus and undivided profits $200,000. Dividends May 1 and November 1; rate past year, 10 per cent. President, Albert H. Waite; Cashier, Gilbert K. Rand; Directors, Arthur P. Rugg, Ransom C. Taylor, William H. Sawyer, Albert H. Waite, Orlando W. Norcross, William H. Inman, J. Russel Marble, Frederick E. Reed, Charles H. Morgan.

WORCESTER NATIONAL BANK, 9 Foster Street. Incorporated as a State Bank in 1804; as a National Bank in 1864. Capital $250,000; surplus and undivided profits $240,000. Dividends April and October; rate past year, 8 per cent. President, Stephen Salisbury; Cashier, James P. Hamilton; Directors, Stephen Salisbury, A. George Bullock, Charles A. Chase, Lincoln N. Kinnicutt, Josiah H. Clarke, James P. Hamilton, Edward L. Davis.

SAFE DEPOSIT AND TRUST COMPANY.

WORCESTER SAFE DEPOSIT AND TRUST COMPANY, 448 Main Street. Incorporated in 1868. Capital $200,000; surplus $100,000. Dividends January, April, July and October; rate past year, 6 per cent. President, Edward F. Bisco; Secretary and Treasurer, Samuel H. Clary; Directors, John H. Coes, Edwin T. Marble, Edward F. Bisco, Henry F. Harris, Charles S. Barton, Charles A. Williams.

SAVINGS BANKS.

PEOPLE'S SAVINGS BANK, 452 Main Street. Incorporated in 1864. Deposits $8,985,436; guaranty fund $400,000. Interest payable February and August 15. Deposits go on interest February, May, August and November 1; rate past year, 4 per cent. President, Samuel R. Heywood; Treasurer, Charles M. Bent; Investment Committee, Samuel R. Heywood, Edwin T. Marble, Alexander DeWitt, Wm. W. Johnson, Henry F. Harris.

Like the famed bird Phoenix rising from its own ashes, we relocate at **19 Church Street,** and are prepared to furnish **Electrotyping, Wood and Photo-engraving.** Special attention given to line and wash drawings.

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THE WORCESTER MAGAZINE

NOVEMBER

1902

DEVOTED TO

Good Citizenship and Municipal Development

PUBLISHED MONTHLY BY THE BOARD OF TRADE

WORCESTER, MASSACHUSETTS,

U. S. A.

B. W. CARLOW & CO.,

INVESTMENT SECURITIES

520-521 State Mutual Building, Worcester.

NEW YORK. BOSTON.

The Worcester Magazine.

VOL. IV. NOVEMBER, 1902. No. 5.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

Worcester Woman's Club.

THE formal opening of the building belonging to the Worcester Woman's Club-house Corporation, on the evening of October 6th, was the realization of hopes and expectations reaching through a long term of years. Twenty years ago the Worcester Woman's Club was meeting in private parlors; to-day it is as well housed as any similar organization in the land. Indeed, to Worcester eyes the appointments of the new Salisbury and Tuckerman street edifice appear little short of palatial. No public building in this city can vie with it in the richness and splendor of its adornments, and far larger cities can show very little that surpasses them.

Located at the junction of Salisbury street and Tuckerman, it has most excellent surroundings. When the first Stephen Salisbury, nearly one hundred and fifty years since, purchased the stretch of land to the northwest of his mansion, he little dreamed of the use to which his grandson, in the far future, would put the fertile acres for which he had no further employment than the raising of grain and the pasturage of cattle. Now, could he look out from his long home in beautiful Rural, he would see massive and elegant structures occupying the land where in his day only agriculture flourished. The third Stephen Salisbury, within the last decade, has done much to beautify the north end of Worcester. The Central Church and the Society of Antiquity were pioneers when they went beyond Lincoln Square to find permanent locations. For a time, they seemed not a little lonesome, but soon the city secured a site for one of the prettiest of her many schoolhouses on Salisbury Street, and then the Commonwealth, in search of land for an Armory, took that just east of the school. Next, in the prosecution of his scheme of development, came the placing of the Art building between Tuckerman Street and Lancaster, through Mr. Salisbury's liberal giving. All this time a tongue of land to the northward of the Antiquity edifice was conspicuous by its position

and its lack of something to cover it. Many and many times was heard the remark, "I wonder what Mr. Salisbury intends to do with that land." Finally the answer came in the knowledge that he had given it to the Worcester Woman's Club, and his gift was followed by the thorough approval of the public.

To build a club-house worthy of the organization and location, however, was a matter of no small moment. Money, and lots of it, were necessary for such a purpose, and the meetings of the Club for the consideration of this question were long and earnest, their final outcome being the incorporation of the Worcester Woman's Club-house Corporation, whose stock was purchasable by people outside of the Club as well as by the members themselves. The date of incorporation was June 13, 1900, with the following officers and directors:

Miss Georgie A. Bacon, president.
Mrs. Nellie F. Rogers, clerk.
Mrs. Julia T. Murdock, treasurer.
Mrs. Ella L. T. Baldwin, Mrs. Mary C. Bullock, Mrs. Mabel Knowles Gage, Miss Sarah A. Henshaw, Mrs. Hester A. Knowles, Mrs. Melora F. Pratt, directors.

When the subscriptions warranted, the designing of the building was given to Miss Josephine Wright Chapman of Boston, though Worcester County people are proud of the fact that she is originally a Fitchburg girl. She came to this task with a reputation enhanced by her designs for the new Craigie House of Harvard and the New England building at the Pan-American. Such was the shape of the site, she could employ no stock ideas, but must evolve something absolutely new for the triangular bit of terra firma to be covered with the new edifice. The triangle itself is not regular, and from its southwestern angle it slopes rapidly both north and east. The conditions thus imposed have in the end produced all the more pleasing results, for no traveler, from near or far, will hesitate to pronounce the clubhouse not only unique, but strikingly beautiful, a tribute alike to the woman who designed and to the women who accepted. Though the externals may suggest the Oread, very likely the structure had been the same even if the Oread had never existed.

Committed to the faithful and capable hands of George H. Cutting & Co., builders, of this city, work was begun the 1st of September, 1901, and has steadily progressed to the finish. The masonry was supervised by John Bartlett, and up to the plastering, the woodwork was under the immediate supervision of Foreman R. J. McGough; and subsequently Mr. Alexander Cameron had the finishing in charge. After the builders came the decorators, Messrs. Schupbach & Zeller of Boston, whose work affords unqualified delight to every beholder.

The material employed in building is brick with light Indiana limestone trimming. The almost white facing of the outer walls is made of bricks brought from Shawnee, Ohio. Contrary to general expectation, the main entrance is on Tuckerman Street, for the convenience of entrance to the great hall. To one passing along the trolley line, this situation would remind him of the military term, "Face to the rear." This entrance is elaborate and impressive, its approaches being made of Tennessee marble. Thus the building presents, exteriorly, four full stories on the east, with a gradual descent from three to four on the west and north. The skyline is pleasing through very heavy copper openwork which surmounts the brick and limestone cornice.

The dimensions of a structure so

irregular in form are hard to give, but from the centre of each tower, along each leg of the triangle, the distances are, on the Tuckerman Street side, 108 feet; Salisbury, 98 feet, and on the south side, 92 feet. The diameter of each tower is 28 feet, and on each floor the tower with the immediately adjacent space constitutes a suite of rooms north and south. On the first floor the south parlors are those designed as reception rooms, while those on the north comprise the Renaissance suite. The second floor presents the Dutch and Moorish suites, appropriately decorated and furnished—the Dutch to the north and the Moorish at the other end of the corridor. Upon the top or third floor are the crowning glories of the edifice in the shape of colonial suites A and B, both most exquisitely adorned and worth the climbing of many stairs to see. In these days of elevators and general antipathy to the use of human power in getting up stairs, one cannot help wondering why this up-to-date building does not contain an elevator.

MISS JOSEPHINE WRIGHT CHAPMAN.

There are many people who will not hesitate to say that the main or Tuckerman Hall is the chief attraction of the building. If its acoustic properties prove good, there is no reason why it should not become one of the most popular assembly places in the city, i. e., where the audience is not likely to exceed eight hundred, which is its nomi-

nal capacity. The dimensions are 88x46 feet, and a gallery extends across the entire western side. The finishing, in blue and gold, excels by far everything of the kind in Worcester. Outside of the Tuileries in Boston, New England cannot show its equal in any public rooms. In height, extending from the first floor to the roof, the space devoted to the hall is ample. The name, though directly from that of the street upon which the building faces, is a delicate tribute to the family name of that Madam Salisbury who was the first mistress of the mansion at Lincoln Square, and the grandmother of the Stephen Salisbury who has done so much, not alone for the Club, but for every praiseworthy institution in Worcester. In this hall will be held the regular meetings of the Woman's Club.

Opening from the first floor on the Salisbury Street side of the edifice is another and smaller hall, itself a beautiful room, which is admirably adapted to the gatherings of people to the number of three hundred. Circular in form, it has a diameter of fifty feet, and bears the name of Dean, the maiden name of Mr. Salisbury's mother, a pleasant reminder, on the part of the Corporation, that its members are not unmindful of his kindness.

Worcester Woman's Club had its birth, so to speak, December 9, 1880, when, at the home of Dr. and Mrs. W. A. Knight, the organization was effected with a membership of twenty-two ladies, who elected as their first President Mrs. Frances M. Baker. From that unobtrusive beginning, so modest that the papers knew little or nothing of it, and it was not till 1887 that the City Directory knew of its existence, the Club has grown to a membership of six hundred women, with a waiting-list of more than one hundred would-be members. Except in name, this body of ladies, called the Woman's Club, bears no likeness to the numerous clubs of the masculine gender. There are no bars nor billiards, no lounging places, though recognition of certain peculiarities of men has induced the ladies to equip for their gentlemen friends a smoking-room, for which in the present stage of development they themselves have no use. On the contrary, the chief motive of the organization has been not personal ease nor comfort, but the pushing of mankind up to higher planes of living and doing.

From the very beginning, whether meeting in private parlors, in Association Hall, or in that of the Y. W. C. A., there has been no departure from the prime principles of the Club, viz., the informing of themselves upon subjects of present general interest and those "more important special questions which are now pressing upon all peoples everywhere for a just solution, because involving the welfare of humanity." The manifest zeal and honesty with which the work was begun and continued soon called the attention of progressive Worcester women, and there has been no period of lethargy nor backwardness in these more than twenty years. Only three names appear upon the honorary list, hence it will be seen that the Club is one of workers. The women who have been thus honored are Lucy Stone, Julia Ward Howe, and Clara Barton, one long since passed on to another sphere of usefulness; the others, though aged, still potent factors in all that pertains to the good of humanity.

The activity and forethought of the Woman's Club have afforded the city opportunities to see and hear some of the brightest men and women of this and other lands, besides giving an impetus to many a scheme for public good. Fortunately, it is possible to go through the well-kept records and select there-

from some of the names of people introduced to our citizens by these ladies. Among them are found those of George M. Towle, the historian; Prof. H. H. Boyeson; the widow of General Custer; Rev. Wm. R. Alger, Prof. E. S. Morse, Rev. John Watson (Ian Maclaren), Conan Doyle, William Hamilton Gibson, John Fiske, Hamilton W. Mabie, Col. George A. Waring, James Whitcomb Riley, Prof. E. H. Griggs, Hamlin Garland, Rev. Henry Van Dyke,

CLUB-HOUSE,
from the North.

Prof. Felix Adler, Lucy Stone, Edwin D. Mead, Julia Ward Howe, Mrs. J. C. Croly, Dr. Lyman Abbott, Louise Chandler Moulton, Edna Dean Proctor, Col. T. W. Higginson, George W. Cable, Prof. A. S. Hardy, Mrs. Sidney Lanier, Bliss Perry, Jacob Riis, Woodrow Wilson, and many others.

After all, the members of the Woman's Club would be far from willing to rest their claim for public approval on the fact that they have afforded entertain-

ment for the passing hour. Rather would they point to the many innovations in promoting education, health and charity which they have been instrumental in furthering. Twenty years ago they were moving for kindergartens in the public schools, and at almost the same time they began the demand for manual training, bringing hither in their earnestness Superintendent McAllister and Professor Henderson from Philadelphia. From the visit and remarks of Dr. Abbott of the State Board of Health came a distinct advance towards the hospital for contagious diseases. By virtue of her position, the President of the Club is a member of the Public School Art League; to the Art Museum the Club gave the figure of Winged Victory; the Boys'Club has repeatedly felt the results of these ladies' generosity; money was contributed to the Longfellow Memorial Fund; the Rutland Sanitarium has been remembered substantially; books have been contributed to southern traveling libraries, and also sent to the Public Library of Devil's Lake, North Dakota, a fact which may lead that sulphurously designated precinct to change its name; several years ago they started, and have since maintained summer vacation schools, whose benefits for the poor it is impossible to overestimate; and for many a month these women have maintained what they call their extension work, i. e., they follow up the sewing schools for children with meetings and entertainments for the mothers, giving familiar talks on thrift, housekeeping, industry, etc., and often presenting a simple repast, thus endeavoring to reach the sensibilities of the poor by the avenues of both mind and body.

Every one in the Club is supposed to be a worker, and to this end all are assigned to some one or more of the following departments, viz., literature, science, art and music, history, education, work, social, and miscellaneous. In these lines there is always something doing. Under the head of literature, probably more thorough study of Browning has been had here than through any other Worcester agency.

In a word, if there be one subject more prominent than another, expect to see it taken up and discussed by the Woman's Club, and if there is any go in it, they will make it go.

The presidents of the Club from the beginning have been as follows:

Mrs. Frances M. Baker, 1880-1881.
Miss Mary P. Jefts, 1881-1885.
Mrs. Mary C. Harris, 1885-1887.
Mrs. Eliza D. Robinson, 1887-1888.
Mrs. Abbie L. Sumner, 1888-1890.
Mrs. Abby L. Stone, 1890-1893.
Mrs. Annie W. Comins, 1893-1895.
Mrs. Ella L. T. Baldwin, 1895-1897.
Mrs. A. Louise McCullagh, 1897-1899.
Miss Georgie A. Bacon, 1899-1901.
Mrs. Clara S. Lovell, 1901-1902.
Miss Georgie A. Bacon, 1902-.

Address of President Carroll D. Wright,

AT THE INAUGURATION OF THE COLLEGIATE DEPARTMENT OF CLARK UNIVERSITY.

[On the 9th day of October last, in the gymnasium of the University, at 10.30 a.m., came the exercises incident to the formal opening of the new department. The Hon. George F. Hoar, President of the Board of Trustees, presided. In addition to his own remarks there were addresses from the Hon. Henry Cabot Lodge, President G. Stanley Hall of the University, and President Carroll D. Wright, whose words are appended in full. The day and event were impressive. The large and appreciative audience was made up of pupils from the public schools, the Polytechnic, Holy Cross College, and the Oread, as well as from the citizens of Worcester. The faculty of College and University, with the Trustees, held seats upon the platform. After the inaugural, a reception was given at the home of President Hall.]

Mr. President and Gentlemen of the Board of Trustees.

Before taking up the topic I have chosen for my address this morning, I wish to express to you, and in a public way, my keen appreciation of the honor you have done me in selecting me to preside over the affairs of the collegiate department of Clark University. I not only appreciate the honor, but I recognize in large degree the responsibilities that come with it. When I accepted your invitation you did not ask me to make any pledges relative to the work to be done here, yet now and here, for myself and for the gentlemen who have kindly consented to serve on our faculty, I wish to pledge you our most devoted service in the interest of the new institution.

It is most inspiring to contemplate the organization of an enterprise like this. We realize that the new College is in the midst of a cluster of educational institutions that constitute Worcester an educational center. The soil exists here for most abundant fruitage in her institutions. The magnificent public-school system of Worcester; the excellent private schools; the State Normal School, one of the best of its kind; the well-known academies; the College of the Holy Cross; the Polytechnic Institute; the Clark University; and now this new College as the youngest in the community of educational institutions, offer every opportunity for the young men and women of Worcester to obtain every advantage in educational directions and to bring to this center many from outside its precincts. These institutions, which have had an honorable career, offer stimulating influences for us, who are just starting on a long and, may we hope, prosperous career. Here, in the Heart of the Commonwealth, let the new College bend all its efforts to increase the importance of this central position.

The College opened last Wednesday under happy auspices. Through your generosity the provisions of the will of Mr. Clark will be carried out in a way which I trust would meet his approval could he be present to witness our efforts. The College opened with 79 students in its freshman class, 32 larger than that of any college in the Commonwealth at its opening. You will be interested to know that of those who have been admitted, 46 come from Worcester, 25 from other parts of the State, and the remainder from Connecticut, Vermont, New Hampshire, New Jersey, Rhode Island and Delaware. The College begins its work with the advantage coming from the observation of experienced educators of what has been done and what is being done by other colleges.

Our policy of instruction is new in New England. We have adopted the group-system of studies, by which we shall be enabled to accomplish as much in the three-years' course stipulated by Mr. Clark as is usually accomplished in colleges requiring four years' work leading to the degree of Bachelor of Arts. In this we have set a high standard. Harvard, until the present

time, with a four-years' course of study, required about 51 units of work in order to entitle a student to the degree of A. B. By the policy adopted here we shall require 50 units in order to secure the same result, and this can be accomplished under that policy and by improved methods of instruction. By this policy are secured the principal benefits of arbitrary requirements and of the elective system combined. We therefore confidently expect that when the class of 1905 closes its career in this new College, it will have accomplished as much as could be accomplished in any college of the first grade. This is our ambitious hope, and our expectation is to secure this desired result without sensational departure from well-established usages. These usages we must imitate and emulate, so far as they are of a high standard and have proved their right to be followed; we must supplement them wherever they are weak or faulty. We shall be happy indeed if these hopes can be realized in any substantial degree. Your support, your considerate interest, and the interest of the citizens of Worcester, are essential to the attainment of these desired ends. May we not expect that the new College shall achieve for itself as a college the reputation which has come to the university?

The noblest of all noblemen is the Christian gentleman. This title can not be secured by the favor of any ruler nor by the act of any legislature. It is a title bestowed by a man's own neighbors—not by the world at large, but by those with whom he is closely associated. He is a man of honor, of accomplished attainments; a good citizen, recognizing and practicing all that that term implies; and a good neighbor, to be trusted everywhere, to be made a leader and a servant, and no man who knows him can dispute his title. He is a gentleman because he recognizes the virtues and the amenities of private life and of life in the community. He is a Christian because he puts his conscience into everything he does, recognizes his responsibility to his community and to his God, and is always willing to recognize the rights and privileges of other men as at least equal to his own rights and privileges.

Probably the best service of the Christian gentleman is in his attitude to the public. Undoubtedly some such impressions prevailed in the mind of Jonas G. Clark when he made his will endowing this new College, and I can pay no more appreciative tribute to his memory than to take the subject of this address from his last will and testament, in which he provided for a college where young men may obtain in a three-years' course a practical education which shall fit them for useful citizenship and their work in life.

But what is a useful citizen? First of all, he is a man who is able to support himself and family without burden to the community in which he lives. Second, he is a man who understands the benefits to be derived from good government and who has the courage to perform his part in securing it, and to this end he must be equipped, through proper training, for the performance of his duty as a voter and as a leader who may be selected by his associate voters; in the words of President Lincoln, while he may be illiterate, he must not be ignorant. Third, he must be a good neighbor, ready at all times to do good deeds, to help the unfortunate, and to be a power in his way in making society what it should be—the protector of every individual's rights. Broadly, then, a useful citizen must be a Christian gentleman. The question to be discussed here is, Can the college aid in producing or developing the useful citizen?

At the outset it must be recognized —and I wish to express my thought with a simple truism—that society is formed when individuals meet; it can not exist with scattered individuals. There must be a coming together of many units, and the characters and the consciences of these units determine all social virtue or social disorder. President Roosevelt, at the dinner of the alumni of Harvard College in June last, used these words: "If a college education means anything, it means fitting a man to do better ser-

vice than he could do without it. If it does not mean that, it means nothing; and if a man does not get that out of it he gets less than nothing out of it. No man has a right to arrogate to himself one particle of superiority in consideration of his having had a college education, but he is bound, if he is in truth a man, to feel that the fact of his having had a college education imposes upon him a heavier burden of responsibility; that it makes it doubly incumbent on him to do well and nobly in his life, private and public." This is the testimony of a man of wide experience who views life from the high outlook of the chief executive of our country. His words are true words. A good citizen and a good neighbor himself, he recognizes that the purity of government and the welfare of the people can be secured only by the proper training of the individual units.

The college, while teaching to its fullest capacity the many things which must be learned in a college course, has a duty to perform beyond mere instruction. The constant demand in public service at the present time is for the college and university man, the man who had been taught to govern his actions by his knowledge of the actions of others, to judge governments and the events of life, as the days go by, by his knowledge of history, by his understanding of the philosophy of the events of the past; and the experience of the past few years in our own country has been most inspiring in this direction. If you look at the roll of public men you will find that the man trained in the college is coming to the front in executive and administrative matters in a larger degree than at any previous period in our history. This is most hopeful; it is most encouraging, and the prayer of all good citizens is that the habit may grow and become universal.

The duty of the college, then, becomes more and more emphatic as we consider its relation to citizenship. As Senator Hoar has pointed out recently, no man who has had a college training regrets it, while every man who, through circumstances or desire, has not received that training feels the lack of it. Such testimony can not be ignored, but it imposes a duty upon the modern college which was not felt in the older time, when learning was esoteric not only in its methods, but in its aims. It was for the choice few; there was an aristocracy of learning. College work is now exoteric in its nature, and it aims to benefit the whole mass of citizens as well as distinctly the few who are able to enroll themselves as students.

We used to hear of the three learned professions, and the college curriculum was constructed for the sole purpose of fitting a man for the law, or medicine, or theology. The branches taught were few in number, but there was an intensity in their prosecution which it would be well to perpetuate in the broader curriculum of the modern college. The old expression, "the learned professions," is obsolete, for now, in addition to them, there are letters, art, engineering, journalism, architecture and other departments which may well be called learned, for it requires special fitting now to secure success in any one of them. This means more than the acquirement of what we call broad culture. The college is for culture; it is not for technical or professional training; it is to give the student that broad foundation of general knowledge which shall enable him to acquire more quickly and more efficiently the specific equipment which he may select for his life-work; it is to secure those attainments which mean the necessary equipment of the citizen of the Christian gentleman without regard to the particular line of service he may adopt. It comes under that description of Platen, who, when urging instruction in act, said: "The more things thou learnest to know and enjoy, the more complete and full will be for thee the delight of living." The delight of living, the delight of work, the delight of all occupations of high or low standard, is in equipment, is in love of the art of work, is in the appreciation of accomplishment. Thus the modern curriculum aims to secure for

every student knowledge in more things, that the man's life may be more complete and full.

This does not mean that any of the efforts that were made in the older time with such persistency shall be lessened, but it means that methods of instruction shall be so regulated and improved that the student in the modern college can embrace and comprehend those things which are now essential to the equipment of the modern citizen. The study of the ancient languages, mathematics, and philosophy, which comprehended the old curriculum, will still hold sway in all educational institutions, but the wisdom of the present time indicates that the study of the ancient languages is not to make Greek or Roman citizens, as the German emperor has expressed it, or French or German citizens by the study of modern languages, but to produce the very best American citizen. The study of the ancient languages gives an inspiration in all educational work that can not be acquired in any other way. The study of all the modern branches that are embraced in the curriculum of the present time in our college adds to the culture and the training gained by pursuing the older method.

College work should be undertaken in general for its own sake—not because a man can earn more money on account of his college training, but because he is to be made a better man through the influence of that training. He must draw his lessons from the past, and thus emphasize the value of the work of the present. By his college training he acquires that best ability of all abilities—adaptability. He is armed in every direction, and if in his training it can be impressed upon him that honorable action, the highest private and public virtue, and the keen comprehension of all that is good and right and strong are essential to the educated man above all others, then his college work has accomplished a double result.

The college has a higher function than the training of a man to oratory, or the power to move great gatherings of men. The professor in the college has a higher function than to teach the plausibility of expression or the attainment of those graces which belong to the superficial man, but which enable him to pass in society as the accomplished scholar. The student must learn that there is something higher than the mere agitation for a virtuous community, and that it is only by sound methods and a persistent patience that men can be graduated capable of acting for the best, for virtue, for good influence; that the college is not simply to train a man to shrewd manœuvre and political astuteness, or for the rostrum, but that he is to be trained as a man in all that term comprehends. This means that the college should cultivate habits of self-government as one of the best lessons to prepare men for good citizenship.

Smith College, in our State, has set an excellent example in this respect. While its students are young women, the general atmosphere of the college is one of freedom. Students are not challenged to disorder by numerous and petty rules, nor are they so confounded by law as to identify principle with convention. As I recollect it, the written code of that college consists of but one law—lights out at ten. The unwritten law is that of every well-regulated community. Now this is a good example for our new College. It does not mean that freedom is license. Students should be left largely to their own consciences, with the understanding that knowledge is proffered as a privilege and is so received. If habits of self-government are inculcated in the college, the student will be apt to recognize the value of good government and conform his conduct in accordance with high ethical precepts.

I have read somewhere, in an extract from the early rules of Dartmouth College, probably prepared by Doctor Wheelock, the founder, the following provision: "That no English scholar, whether supported by charity or otherwise, shall at any time speak diminutively of the practice of labor, or by any means cast contempt upon it, or by word or action endeavor to

discredit or discourage the same, on penalty of his being obliged, at the discretion of the president or tutor, to perform the same or the equivalent to that which he attempted to discredit." This may have been an excellent incentive to good conduct at the time the rule was made. It is rather severe in its requirements; nevertheless, there is a healthy moral tone to the rule, which means that every student shall respect labor; that every student in the college shall regard the work of any man, whether student or otherwise, as something honorable in life, and not to be discredited or referred to with contempt.

This is the key-note of self-government in any community—the recognition of the rights and duties of others. In this altruistic age we are taught more and more the necessity of what Drummond calls "other selfishness," that element in our nature which enables us to perform our duties with due regard to those being performed by our neighbors. That the training of the college which recognizes these elements in its instruction and in its influence is potent in developing such habits as those to which I have referred and, in a great measure, I believe to be true.

The personal influence of the instructors is of great moment. The small college may be in peril of absorption, as has been recently pointed out by a learned writer, but this does not give me much concern, for the personal influence under which the student acquires the very best moral traits is more easily and emphatically secured in the small than in the large college. The large college has its place; we need make no criticisms of it—in fact, it is not in my heart so to do—but we must have an affection here and now for the small college. In a few years we hope to see more clearly the advantages of the large college and the broader influence which can come from it; but here in this new institution, with the curriculum as it has been constituted, with a corps of instructors whose characters bespeak for them the very best results, with a desire to see introduced methods and practices outside the goal of the curriculum, there is no hesitancy on my part in assuring the public that the moral welfare of the students will be safeguarded.

We shall send young men from this institution to take their part in the great conflicts of life. They must learn to know what labor is; that it is not merely working with the hands, but working with the mind and the intellect, and that it is honorable in accordance with the motive under which it is carried on. They will be taught that when they go from our doors they will have to meet the great problems of life; hence there will be emphasized here the principles of action which ought to govern men in their relations to each other and to the public. Civics, applied economics, supplementing the lessons of all history, can have but one influence—the development and attainment of the good and useful citizen.

The college is not an ephemeral institution; its influence is not for to-day, although to-day is our day and our only day, for the college looks beyond to-day, looks to the training of the minds of men, for so long as men preserve their intellects they are thinking beings, and a thinking being will always develop something new, although it may not be always something of the best. The importance, then, of the college looking to the future—looking to the moral elements of individual character in addition to the scholarly training of the individual—is a duty we can not ignore.

The position of the college as an aid to the production of the good citizen is not an isolated one. It is not confined to systematic instruction; it is a part of life in all its breadth. It has a relation to the state, for in the college there must be taught the nature of the state. Does the state simply represent a corporation for the mere purpose of making laws and of executing them? Does the state represent simply the goal for ambitious citizens? Or, in its nature, is it something else? We who are brought up to recognize the state as something more than a checker-board, with a king-row upon one side,

believe that there is a religious duty toward it and a power in it beyond mere political construction. We believe the nation as it exists in its highest conception is the Christian nation. We believe, with Milton, that a "nation ought to be as one huge Christian personage, one mighty growth or stature of an honest man, as big and as compact in virtue as in body;' and with Hegel, that "there is one conception in religion and the state, and that is the highest of man;" and with Aristotle, that "the end of the state is not merely to live, but to live nobly;" and with Shakespeare, that—

"There is a mystery—with whom relation
Hast never meddled—in the soul of state;
Which hath an operation more divine
Than breath or pen can give expression to."

Can the college do anything towards impressing these lofty conceptions upon its students? If it can not, if it has no power to develop in the individual aspirant for scholastic honors the true conception of the position of the college in relation to the state, it has not half accomplished its purpose.

The college has a relation to the church as well as to the state. I do not mean that it has any particular or active relation to theology, but it has to the religion of the Christian. Religion is the fundamental principle of patriotism—loyalty to a great purpose. The great purpose of good citizenship is loyalty to country, loyalty to humanity, loyalty to every right and grand principle. Religion teaches this, if it teaches anything worth teaching. The college in its relation to the church should aid in this practical work of the development of the human individual character. Why, even Napoleon III said, "We can not separate our love of country from our love of God." It is in this sentiment that citizenship finds its significance as a relationship to a creative and overruling power. In the political work of our country we have high religious duties to perform, and duties which should be approached not only with understanding, but with a deep conviction of responsibility not only to country, but to God. The attribute which leads us to this we call the soul, which does not obey the law of living solely, but the law of duty, and while it is not the province of the college to teach theology, it should teach that element of practical religion which enables the good citizen to comprehend his responsibility to himself, to his family, to his country, to his God.

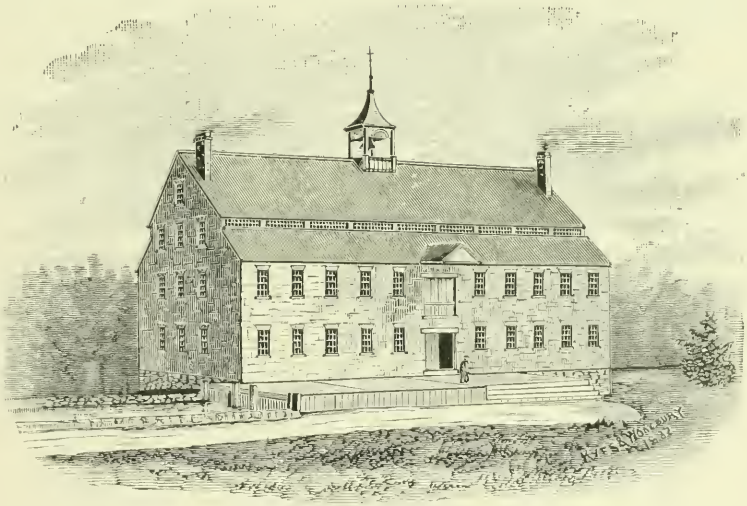
My good old father never closed a letter to me when I was a young man without saying, "My son, be true to yourself and you will be true to God." I used to think that he repeated this rather too frequently, but I have learned to honor and revere him for it. He gave me the key to good citizenship and taught me a lasting lesson, a lesson drawn from the teaching of the greatest instructor the earth has ever known—"Him who came on earth that He might show mankind what 'tis to be a man: to give, not take; to serve, not rule; to nourish, not devour; to help, not crush; if need, to die, not live." Here is the true and the sublime essence of citizenship, and the good citizen is the man who holds himself ready to serve or to be served, to labor or to sacrifice, to give himself for his country's good, to reverence all that helps to develop the nation. The college can help in this grand work not only in insisting that the college training is good for itself alone and for the culture which it provides, but in instructing young men that there is something beyond and something higher to be attained. This particular work can be done by the college not alone through systematic study, not through daily lessons alone, but by the silent, impressive influence of the character of the men who have been set to their great task.

Worcester Industries

VII.

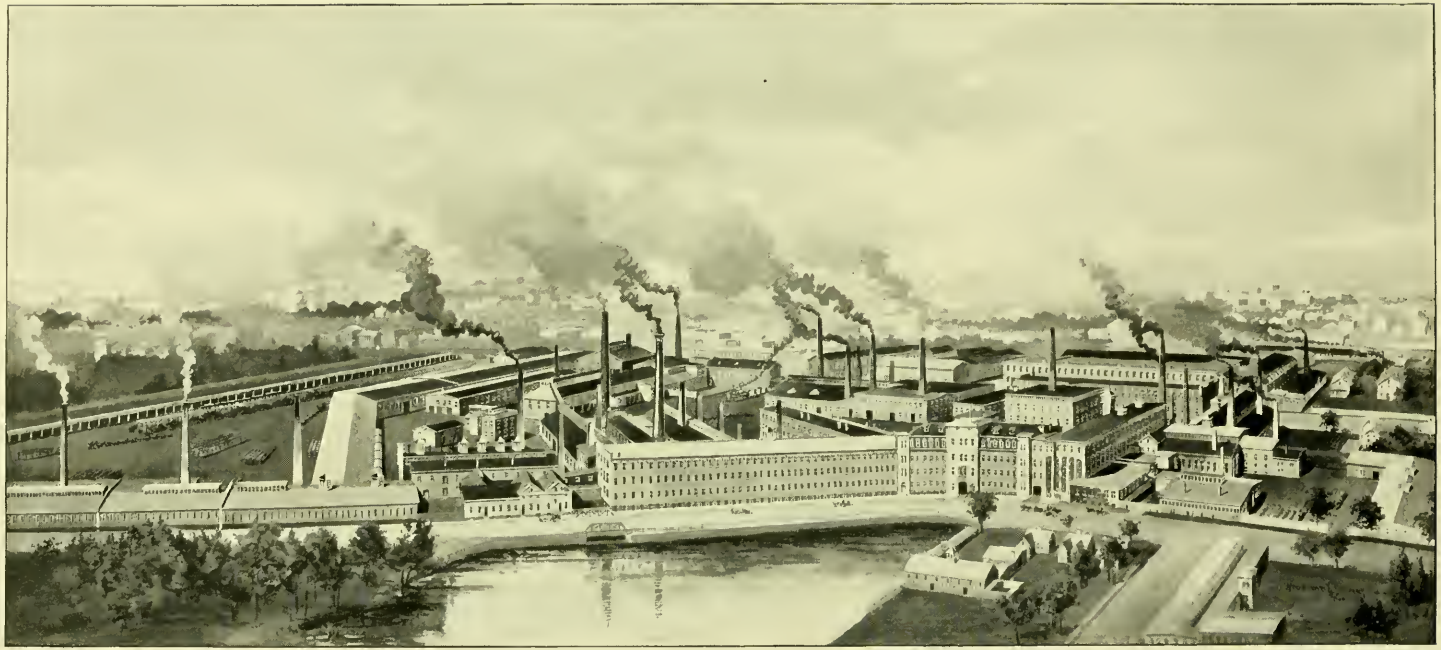
The Making of Wire.

The largest single industry in Worcester is that of wire-making. The Worcester plant of the American Steel & Wire Company in three sections, North, Central, and South, covers one hundred and forty-seven acres of land. Its pay-roll, varying somewhat according to season and demand, ranges from 5000 to nearly 6000 persons. Its monthly disbursements run from $250,000 to $300,000, thus giving some idea of the value of the industry to the city.



THE ORIGINAL WIRE-MILL.
Erected 1834.

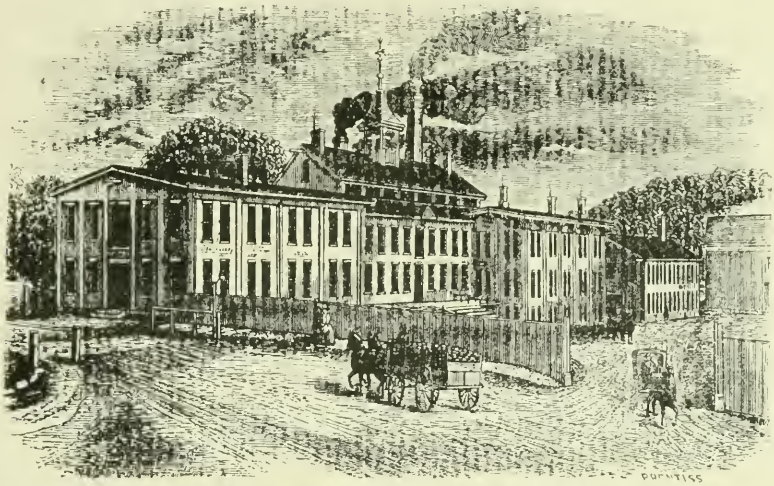
Ichabod Washburn was the first wire-drawer in Worcester and, really, the first successful manufacturer in this line in America. Some of the features that he introduced, in all the intervening years, have not been altered nor improved. While 1831 saw the beginning of his experiments, it was not till 1835, after the late Stephen Salisbury had erected for him a factory on the north side of Mill Brook, that wire-drawing in Worcester began in earnest. To secure power a dam was thrown across the brook where now lies the regular thoroughfare on Grove Street, and a flume conducted the water to the building, 80x40, and three stories in height, having a sort of double roof surmounted by a cupola which contained a bell. This structure, torn down a few years since, was long a silent witness to the wonderful growth and development of the industry. The old bell still exists somewhere. It was in the Chicago exhibit. Of the original three thousand feet of floor space, Mr. Washburn used only one third, and his entire force of help numbered five men at the onset. To-day the North Works cover all the area south of Rural Cemetery, between Grove and Prescott to a point very near Lexington Street. Every step of the advance has been an evolution, every improvement being



AMERICAN STEEL & WIRE COMPANY (North Works).

suggested by an obvious need and accomplished by the ingenuity of competent workmen.

Day and night the whirl of wheels may be heard, indeed it is only during the hours of the first day of the week that the long ranges of brick structures do not give evidence of intense activity within. A forest of towering chimneys betokens the energy supplied and a never-ceasing line of hurrying men tells of the pace that they must take and keep who enter here. Years ago a trip through the mills was deemed the greatest sight that the city afforded. To see masses of red-hot iron reduced by means of rolls gradually to hundreds of feet of snake-like matter, angrily squirming over the floors, to be at last seized and wound upon a reel for subsequent drawing in a cold condition, was a sight to awaken astonishment and admiration in the minds of old as well as young. Then the annealing ovens; next the reduction of an end of the wire to a size which would permit its entrance through a die, there to be seized by a pair of nippers, attached to a reel or block, made to swiftly revolve, thereby drawing the wire through the aperture and so reducing its diameter. This repeated times enough results in the making of the



WORCESTER WIRE WORKS,

WORCESTER, MASS.

ICHABOD WASHBURN & CO., Proprietors.

MANUFACTURERS OF ALL KINDS OF

REFINED IRON AND STEEL WIRE,

Card, Reed, Buckle, Telegraph, Annealed, Broom, Brush,

COTTON FLYER, FLAT AND PIANO.

MACHINERY AND SPRING WIRE FOR MACHINISTS,

STRAIGHTENED AND CUT TO ANY LENGTH.

ALSO, COMMON MARKET WIRE.

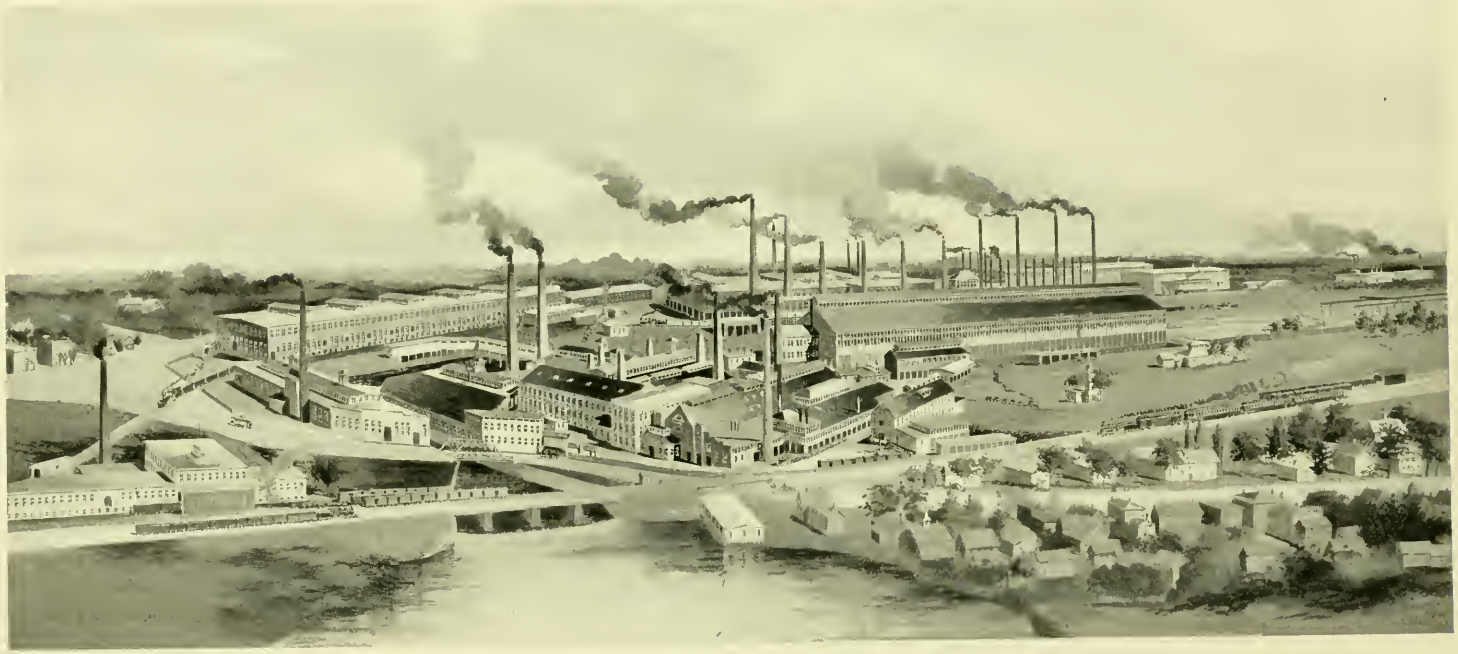
STEEL MUSIC WIRE,

AND PIANO COVERING WIRE.

STEEL WIRE FOR ALL PURPOSES.

ICHABOD WASHBURN PHILIP L. MOEN.

FAC-SIMILE OF A PAGE AD., NORTH WORKS, 1850.



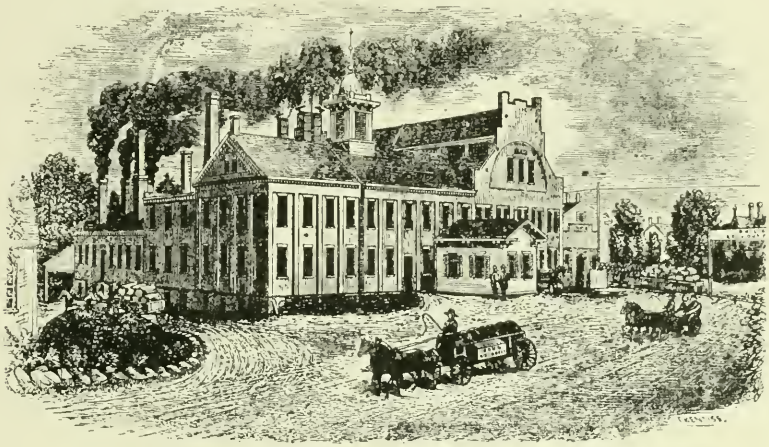
AMERICAN STEEL & WIRE COMPANY (South Works).

varying sizes. The coating with paste or lime to facilitate drawing, the removal of oxide by acid, the galvanizing, or coating with tin or other metal in a molten state, are all features of the work sure to impress any beholder.

So bewildering and immense is the array that the great wonder is how any set of men can keep track of this seeming chaos. Yet with the utmost system, regularity and dispatch, the finished products, all bright and shining, are constantly appearing in the packing-room, there to be carefully wrapped in long strips of paper and stowed away, with no waste of space, in barrels and boxes for shipment to the great world.

Few people have any notion of the great variety of specialties manufactured in the works here. In the wire-drawing proper, some idea of the amount of work required to produce different wires will be shown by the statement that the steel comes from the furnaces in ingots, seventeen inches square, and weighing over two tons each. These are reduced by hot rolling and cold drawing to various intermediate sizes, and wire is produced in the fine-wire department of the North Works as fine as .002 of an inch in diameter. The diameter of the average hair is from .002 to .004. This extremely fine wire can be drawn only through dies made from diamonds, and runs about seventeen miles to the pound.

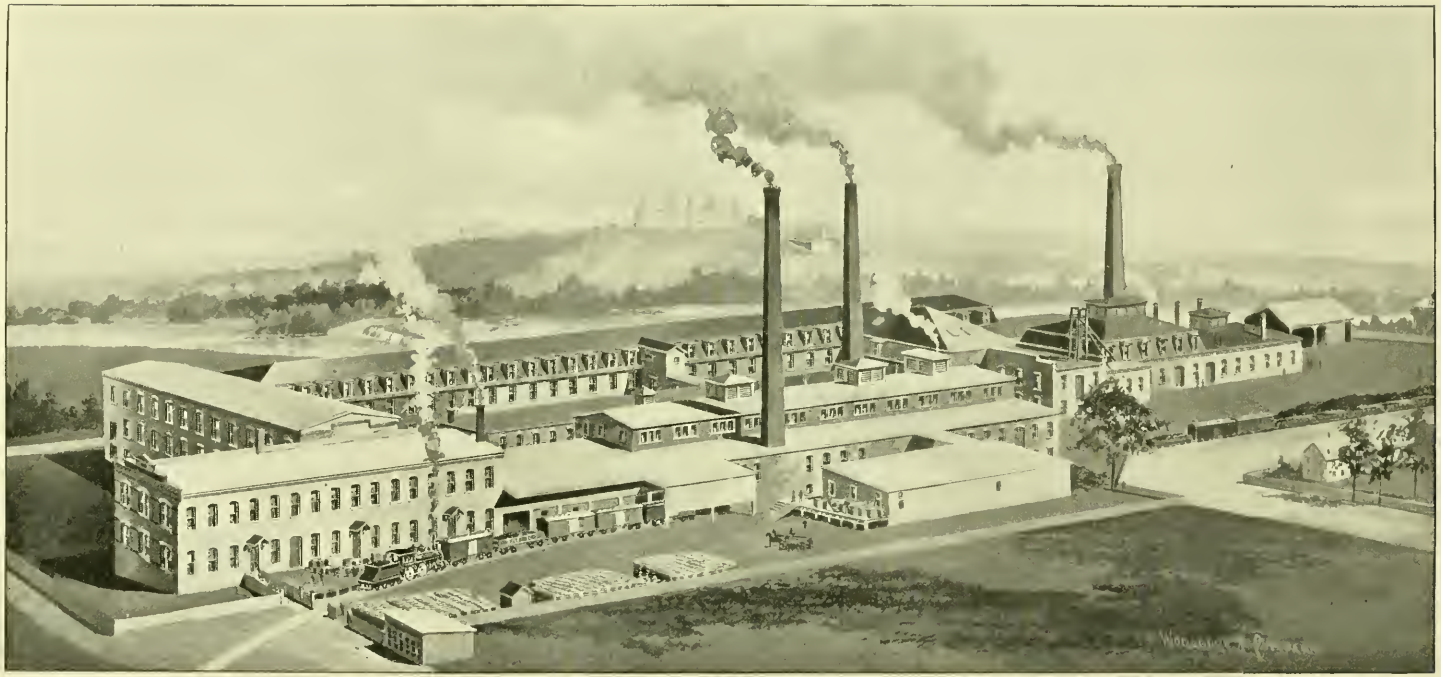
The Central Works date from 1840, when Ichabod Washburn bought the



QUINSIGAMOND
IRON AND WIRE WORKS,
WORCESTER, MASS.,

HENRY S. WASHBURN & CO.,
MANUFACTURERS OF
BRAZIERS,
SCREW AND RIVET RODS,
AND FINE HOOPS.
ALSO, ALL KINDS OF
Bright and Annealed
Market, Telegraph, Spring, Fence,
AND BUCKLE WIRE.
HENRY S. WASHBURN. CHARLES F. WASHBURN.

FAC-SIMILE OF A PAGE AD., SOUTH WORKS, 1856.



AMERICAN STEEL & WIRE COMPANY (Central Works).

South Worcester water power and started the business which, through various hands, has come down to the present time. For many a day these mills have had as a background the verdant slopes of Pakachoag Hill with its crowning glory of Holy Cross College.

It was not till 1847 that Mr. Washburn purchased the water privilege at Quinsigamond and began the enterprise which to-day surpasses the other two local plants in area covered. He was moved to this through the necessity of a rolling-mill of his own. The work of the three divisions is distributed to the seeming advantage of the general output, every section being under the direction of skilled foremen and managers, and altogether representing the greatest combination of specialty wire-mills in the country. The Worcester mills are largely self-sustaining, so far as raw material is concerned, making their own steel, rolling their own billets, and drawing their own wire, down to the finishing of their various specialties.

When visitors were admitted to the North Works no one phase of the same attracted more interest than the building in which, complying with a request made by Chickering, the great piano-maker, in 1850, Mr. Washburn began the manufacture of piano-wire, and to this day the old structure is still devoted to that purpose, the result being the best wire of this kind made in America, as well as exceeding in amount all that made elsewhere in the land.

The extent of this vast industry may be appreciated when it is stated that twenty-six closely printed pages of its catalogue are taken to name the forms and varieties that its products take. While in pure tonnage some other plants of the great combination may excel that of Worcester, no other equals it in specialties. Alphabetically, under "Special, Round and Miscellaneous Wires," are given no less than eighty-three varieties, and under "Flat Wires" are found seventy-three kinds. How many people ever dreamed that so many shapes and forms existed? The whole world is covered in an effort to find out what is wanted, and then no pains are spared to fill and satisfy the need. Sometimes, what had been wonderfully popular suddenly ceases entirely, and then the machinery is rolled aside, against the day when fashion shall again demand its manufacture. Great combinations of beams and wheels for the making and winding of crinoline wire are not the only idle machines within these vast walls, but their day will come again as the whirligig of time renews the wants and caprices of men and women.

Among the important specialty de-departments are to be mentioned the following:

In the wire-rope department ropes and cables are made varying in size from the immense cables used for suspension bridges to the finest wire cords used for sash-cord, etc. Few realize the immense amount of hoisting and transmission rope used, especially in the mines of the country. The Company manufactures cables for cable roads where such roads are still in operation. These cables are made of special steel wires of large sizes, and have to be in one length, according to the length of the division operated. Some of these cables are three and four miles long to one piece, and weigh as much as 100,000 pounds.

The great advance in electrical fields has made this department one of the largest of the works. The factory turns out the large overhead feeder cables which are familiar to all, and which supply current to the electric street railways and distribute current for the electric light companies. Another important part of this department deals with cables for high voltages, insulated with rubber or paper, and covered with lead for underground use.

The Company is a large manufacturer also of cables for submarine purposes. Some of the different varieties of this product are illustrated in one of the cuts shown in this article. (See wire cables.)

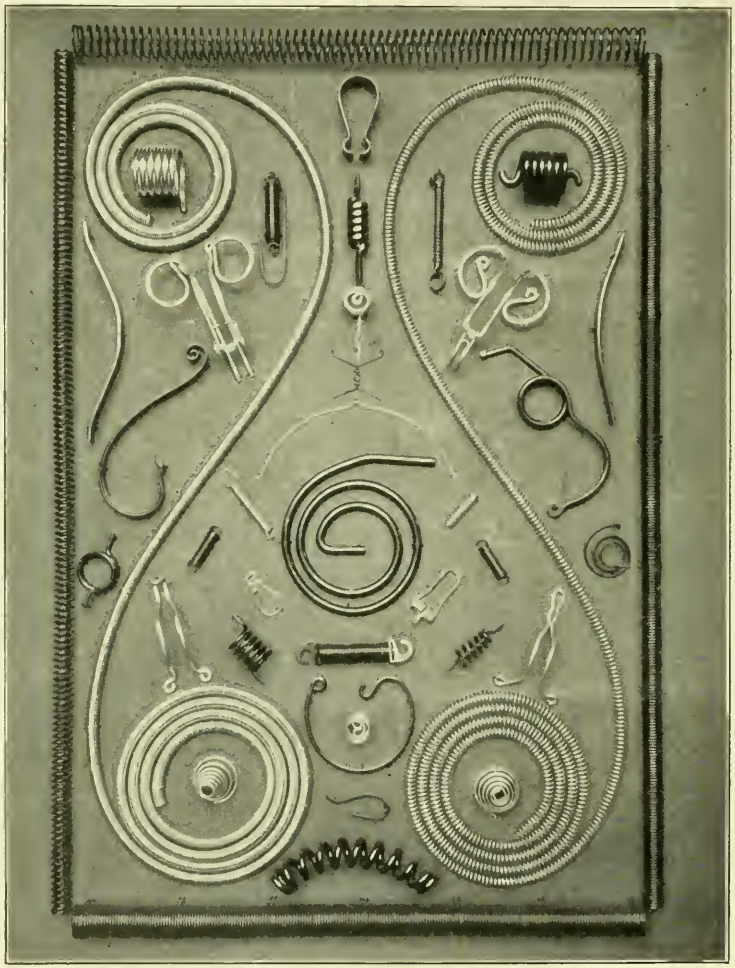
The coiled spring department is one of the most interesting divisions of the work. All kinds of furniture springs

are made, as well as springs for use in various mechanical machines. The product of this factory is distributed from the very finest of springs doing the very lightest work to the heaviest car-springs.

The flat-wire department is one of the most important of the district. Flat wire is used for a great variety of purposes, from the smallest watch-spring to those for the largest motor.

An important output of the factory is copper and iron telegraph wires. The latter are coated with spelter, the product being known as galvanized telegraph wire. Years of experimenting have brought this product to such a state of perfection that it is practically rust-proof.

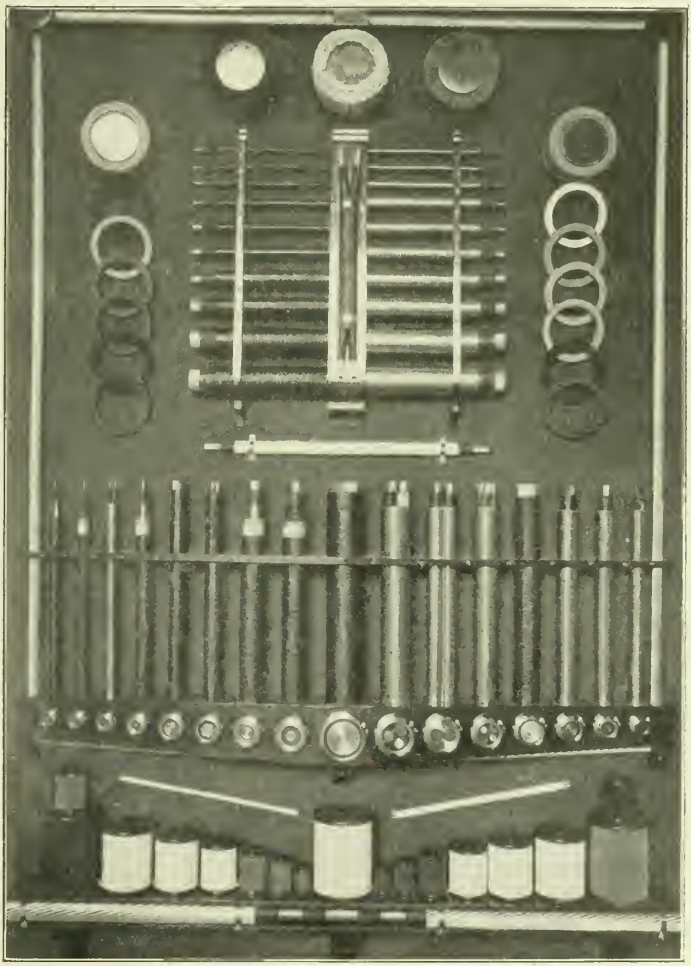
The total output of the mills in the district is approximately 15,000 tons per month. When it is considered in what a variety of shapes this tonnage is distributed, some idea of the details of the work in the mills is given.



COILED SPRINGS.
From the Pan-American Exhibition.

Although the American Steel & Wire Company is recognized as the largest manufacturer of wire in the world, it is not as generally known that it is also the largest producer of sulphate of iron, commercially known as "copperas," and also one of

the largest of the oxide and Venetian-red makers. In the manufacture of wire, vast quantities of sulphuric acid are used for the purpose of cleaning the product from scale and of any form of oxide; in the course of this process the acid becomes more and more charged with iron, until its efficiency for cleaning is destroyed. This waste acid is utilized to make copperas and Venetian red, as mentioned above. By the use of specially designed furnaces, colors are produced varying from the most delicate shades to deep Indian.

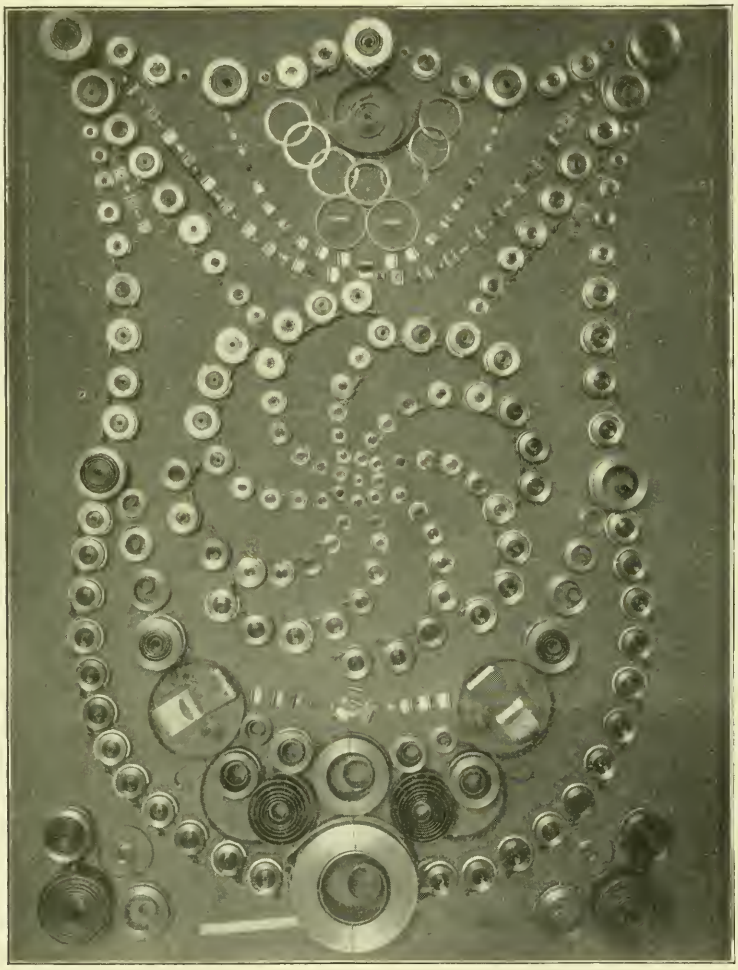


ELECTRIC WIRE AND CABLES.
From the Pan-American Exhibition.

Those were noisy days on Grove Street when barbed fence-wire was made there. The making of this great necessity came when the land was facing the problem as to what could be used in place of boards and rails for boundary and division lines. Then came the patents upon this form of barrier, and so evident was its utility that the matter of its possession became a question of litigation, and this city will not soon forget how tenaciously the question was fought out in the courts. The final decision in favor of the Worcester mills, in company with those at DeKalb, Ill., gave a wonderful impetus to the industry so

long the pride of our city. Though the most of this product is now made in the West, where little material is found for such stone walls as New England has, the fencing is still manufactured here, principally for export purposes, but the clatter has departed from Grove Street to more retired precincts to the southward.

Worcester has long claimed to be a cosmopolitan city, and nothing has so much contributed to this condition as the presence of the wire-making industry. Northern Europe began to be drawn upon fully a quarter of a century since for workmen, both unskilled and skilled, and gradually all Europe has furnished representatives for the various portions of the steel and wire plant. Asia gives of her teeming population, and Armenian and Turk work side by side. Were all to talk in their own vernacular, any one of the many rooms of this great enterprise would be a veritable Babel.

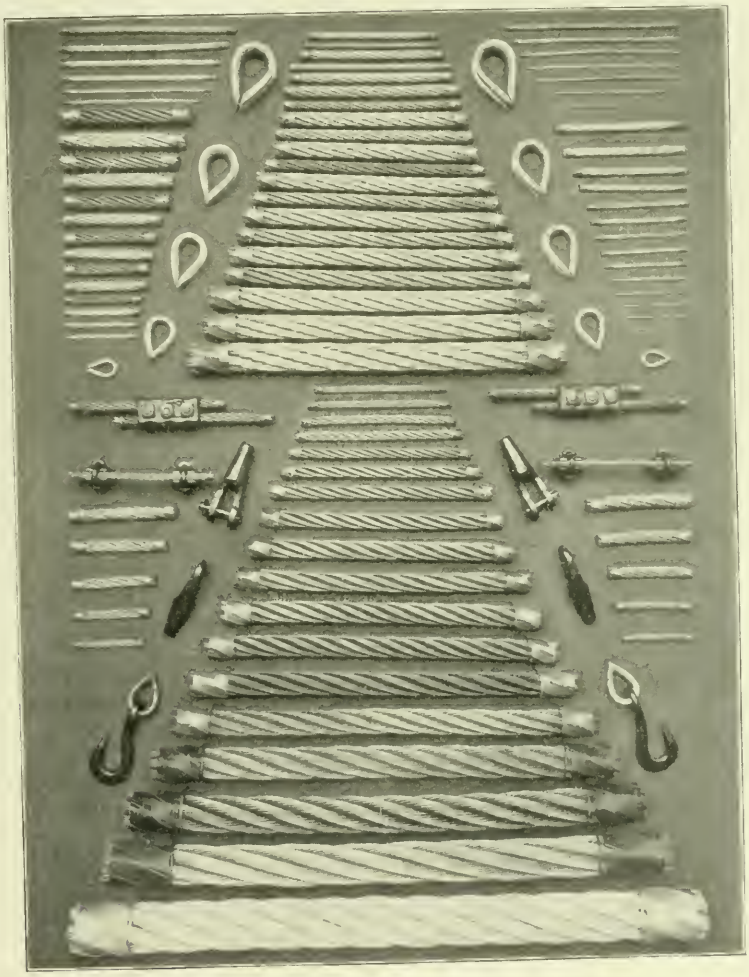


CLOCK, WATCH AND MOTOR SPRINGS.
From the Pan-American Exhibition.

Did space permit, it would be a pleasure to dwell upon the merits of the many men who in the past have given their lives and energies to Worcester's crowning work: Ichabod Washburn, so long a potent force in all that made for public good, still remem-

bered for his munificent gifts to religious, educational and charitable purposes, whose face may be seen on the walls of our Mechanics Hall; his brother Charles, who came down from Maine to associate himself in what proved to be his lifework; the latter's son, Charles F., only recently a factor for all that is good in our midst; Henry S., a distant relative of Ichabod, still living at an advanced age, and whom the public remembers as the writer of "The Vacant Chair;" Philip L. Moen, son-in-law of the founder, for so many years a prominent figure in all of the city's circles, respected and loved by every man in his employ, two thousand of whom with sad faces looked upon his face as it lay still in death; Wm. E. Rice, who succeeded Mr. Moen in the presidency when the latter died, still resident in our city.

In the changes incident to the day and generation, what had so long been a Worcester business, having branches in Illinois and California, the time came when it was desirable for the firm name of Washburn & Moen to disappear in that of the American Steel & Wire, a constituent part of the United States Steel Corporation, said to be the largest in the world and of which Charles M. Schwab is the Pres-



WIRE ROPES AND CABLES.
From the Pan-American Exhibition.

ident. The President of the Steel & Wire Company is Wm. P. Palmer of Cleveland, Ohio.

First Vice-president, J. S. Keefe, Chicago.

Second Vice-president, Philip W. Moen, Worcester.

Chief Engineer, F. H. Daniels, Worcester.

General Superintendent, C. L. Miller, Pittsburg.

General Sales Agent, F. Baackes, Chicago.

Mr. Philip W. Moen, son of the late Philip L. Moen, and formerly treasurer and general manager of the Washburn & Moen Manufacturing Co., is the chief executive officer of the American Steel & Wire Company in the East. The immediate direction of the affairs of the Company in Worcester is in the hands of the following:

H. C. Stoddard, manager.

E. J. Watson, assistant manager.

C. S. Marshall, superintendent of South and Central Works.

J. D. Crosby, superintendent of North Works.

All of these men were formerly in the employ of the Washburn & Moen Manufacturing Co., and their appointment to their present positions proves that the Company recognizes Worcester talent, and in its promotions follows the lines of civil service.

As time advances the scope of this great corporation's management gradually develops. Several months since the announcement was made that workmen who had served a given length of time, or who had become incapacitated for labor while in the Company's employ, should be retired on a pension. Though begun early in the present year, already fifty tried and trusted employees are now drawing substantial aid from the resources of the corporation. Also a benefit fund has been established whose income goes to the aid of men who on account of sickness or accident are incapacitated for work. At all of the plants emergency hospitals are being provided, and rooms will be devoted to such purpose in both the North and South Works, for accidents are of frequent occurrence. A competent surgeon will always be available on the ground, thus contributing to the good of the injured. The Corporation's latest announcement is that all employees during these days of coal famine can have their bins filled with soft coal at cost. It would seem that, tradition to the contrary notwithstanding, corporations have bowels of mercy even if they have no souls.

When Worcester people travel and are confronted by those who never heard of our city, it is a source of pride to them to dilate on the greatest enterprise of its kind in the country, if not in the world. While the story lasts, every Worcester traveler is a schoolmaster indeed.

Municipal Government.

[Extracts from an address made by the Hon. Joseph H. Walker before the Worcester Board of Trade, Nov. 12, 1895.]

Mr. President and Gentlemen of the Worcester Board of Trade.

I do not believe there is a place on earth, of 100,000 inhabitants, where the average of intelligence, integrity and public spirit is so high as in Worcester. I do not believe that relatively there is a place where so many difficult questions have been handled so honestly and so ably, and with so little private gain.

An entire separation of the authority to decide on what work is to be done, the doing of the work, and the approval of the work after being done, is fundamental to good government.

In order to this, a large legislative body is absolutely necessary. The will

or sense of the people—the participation of the people in their own government—can not be had excepting in a large legislative body; neither can it be had without its members are elected on a general ticket rather than singly. Elect ten persons on a general ticket, and each party will be obliged to put on the ticket persons representing ten classes in its constituency, in age, in occupation, in organization, and in opinion, or the ticket representing a class or only a few will surely meet defeat. That is the only way all classes can be represented. A small legislative body necessarily and inevitably absorbs in itself the executive and judicial powers, as our city government has done under the amended charter.

Before Worcester was made a city, it elected to the Legislature on a general ticket a lawyer, a farmer, a manufacturer, a wage-worker, and one from some other calling or profession, not because any law required it, but because public sentiment required it; and let me say to you that during the time that custom prevailed, Worcester had more influence in the Legislature than ten times its population in any other section of the State.

I have not time to give the details of what the city charter should be, but I will only say it should provide for absolute and complete local self-government, limited only by the constitution and laws of the State.

It should provide for a large legislative body, and how that body should be constituted.

For instance: "Elect each year a mayor, with powers corresponding to those of Governor of the State, having the veto power, not only over each act, but also to veto any item in an act.

2d. "Elect five aldermen each year in each of the nine wards, for the term of three years, on a general ticket, and five aldermen at large, each for three years, on a general ticket, making a total of 150 aldermen.

3d. "Elect ten members of the Common Council each year in each of the nine wards, for three years, on a general ticket, making a total of 270 councilmen."

This plan would give the city desirable, true and consistent minority representation.

4th. "Prohibit any member of the Board of Aldermen or of the Common Council from having any control over or in any way interfering with any work being done by or for the city; provided, however, that this provision shall not hinder any committee of the City Council, or of either branch of it, from taking part in any investigation into any transaction in which any person employed by the city was or is engaged, or from doing any work or furnishing any supplies to the city as a bidder under any public advertisement for work or for supplies ordered by the City Council.

5th. "That those persons now clothed with any power by any authority whatsoever by any existing law or act of any city official, shall not be curtailed in their powers or duty excepting as is now provided, until the City Council shall devolve such duty on some other body or individual."

This, in substance, is all the charter we need. We can govern ourselves without interference from anybody, so we do not act contrary to the laws of the State.

Give us this system and we shall have a legitimate minority representation. It is only in this way that the minority can put its best men into their legitimate place.

This system, in its working, would give the city the services of its sons in the years of their highest ideals and aspirations, their purest patriotism and sublimest courage. They would at that time have a chance to serve the city they love. How the memory of the patriotic enthusiasm with which I entered upon my duty in the City Council, to which I was elected in my twenty-third year, comes back to me! Give the young men a chance! Then we shall know whom of them to call to the broader field of state and national councils.

At least ten of the 270 men will be under twenty-five years of age, and over fifty will be under thirty, and they will not be the least useful part of the Council.

No one thing in itself would set Worcester so far ahead of all other cities in solving the problem of a popular form of city government for cities, and keep her to as high, and even a far higher standard than in her past, as to adopt the plan I suggest.

Worcester is as sure to be brought into the disgraceful situation other Massachusetts cities are now in, unless she adopts a wiser system of city government, as human nature is to remain the same in Worcester as it is in other cities.

The one and only disgrace that has come to any political unit in Massachusetts has been in her cities. How many present have gone over the list of discredited city governments? I will not tarnish this address by further advertising our humiliation as citizens of Massachusetts by naming them here.

Our fathers constituted large legislative bodies in Massachusetts, and there was no one thing they more tenaciously insisted upon than that the three functions, legislative, executive and judicial, should not be vested in them; but each in different individuals, and in different bodies of individuals. The whole body of experience in democratic government, without an exception, proves that accountability, efficiency and economy can not possibly be secured in any other way. The organization of our city governments thoroughly violates this principle.

I repeat, it has been conclusively proved that distinct, conspicuous and sole responsibility, of the responsible executor of work, is the only condition under which prompt, cheap and efficient service can be secured.

The mixing of legislative, executive and judicial action and responsibility, as is now done in our city government, makes it impossible to "fix" responsibility, for results, on any individual. It permits, invites, and then conceals and protects, incompetency, neglect and positive fraud. Why haven't we had the city ringing with the cry of fraud? Because our city has been small, but still more because of the high general integrity of the masses of our citizens. It is our duty now to correct our system, so that what has been true hitherto shall be true in the future, and before disgrace comes upon us.

* * * *

It is patent to all that every successful private business is directed and controlled by one mind. He secures his ascendancy in fair competition and the unbiased decision of his associates. This autocracy is a condition precedent to success. Only advice of each partner is sought outside the subordinate domain of each. Each executes his particular work to the approval of all, finally tested in the market.

In nature extremes always meet. Thus good government must be either by one wise man, or by a large body of men, in legislation. This action accords with all human experience. There is no middle ground.

Our state government is a success. Why? Because in it the legislative, executive and judicial functions are absolutely separated from each other.

Our town governments are successful. Why? Because of the legislation in the town meeting, and the execution of work being given into the hands of their selectmen, every citizen being a critic upon their acts, not a boss of them.

In our hermaphrodite city governments, there is no such separation of the several functions. In communities where men are less honorable than our citizens, corruption inevitably results.

* * * *

After reaching a given number, the larger body has less debate. The speaking is left to the ablest men in it. In small legislative bodies the constituents of each member demand that he shall "amplify himself," as the farmer said of his noisy bull.

It is proved that corruption in government thrives, other things being equal, in proportion to the number of members in the popular branch of its legislative body, the rule being, the smaller the body the more corrupt the government.

Students of civil government all agree in condemning the results at-

tained in the government of American cities.

There is not a student of the principles on which free government is founded, there is not a man who has studied the results reached in the government of American cities, who does not deprecate existing conditions and is not in so far, ashamed of his country. They are all severe on the false principle followed in all of their governments.

Their charters are so faulty in principle that they are necessarily being constantly tinkered towards despotic power in their mayors. Their governments are being called to account in a way that violates every principle of trusting the people and allowing them to govern themselves. Witness the constant appeals to the Legislature by the citizens of nearly every city against the city governments.

These things are not done because such acts commend themselves to the people, but in utter desperation changes are constantly being made towards the evils of despotic power to escape the evils in cities that every one deprecates.

Every expedient has been suggested and resorted to to improve city governments, excepting the true one, viz., that of trusting the people to govern themselves and making it sure, in large legislative bodies.

Books New and Old.

Letters from a Self-made Merchant to His Son, by George Horace Lorimer, from the press of Small, Maynard & Co.—If this book secures the patronage that it merits, it will prove a close rival to the famous "David Harum," whose sale is nearing the half-million mark. Originally appearing in the columns of the Saturday Post of Philadelphia, the public was expectant and ready to order ten thousand copies of the work before publication. From the opening sentence to the last every page is fraught with interest and instruction. If amusement go along with both, it is no detriment to the volume. Evidently the writer is well acquainted with the ins and outs of trade; if not, then he has a masterly way of guessing at them. John Griswold of Chicago, pork-packer, has a son. Pierrepont, whom he has sent to Harvard, and the opening letter—there were twenty in all—is sent to this son filled with quaint yet valuable advice regarding his college life. Following missives carry us through the college course and into the pork-packing establishment, to whose growth and development the life of the father is devoted, and finally they find the young man fully launched on the sea of business, one of the operators in the enterprise so dear to the father. Old saws and apothegms are upset and reversed without any compunction whatever, and homely yet pertinent wisdom is flung at that young man in a manner not only amusing, but instructive. The idioms and figures of speech savor wholly of the stock-yard and the packing-house, but the reader has no difficulty in gathering the meaning of every phrase and aphorism. Each chapter has its little story, usually drawn from Pater Griswold's early experience in Missouri, and an illustration which sets the subject pictorially. For a time we may expect pork-packing philosophy to supplant the horse talk of David Harum and the sententious wisdom of Mr. Dooley.

My Memoirs of the Military History of the State of New York During the War for the Union, 1861-'65, by Colonel Silas W. Burt, edited by the state historian, Hugh Hastings, and published by the state in Albany.—This volume of about two hundred pages is a continuation of the policy of the Empire State to give to the public in book form the valuable matter that has been on file in her archives for varying periods. General Burt was employed at the Capitol in an official capacity throughout the War, and for some time thereafter, hence was in a position to learn much that is of interest pertaining to those days. His story, told in a modest way, is exceedingly entertaining, and with the valuable notes added by the editor becomes a useful contribution to Rebellion literature.

The Petersham Lyceum, 1833-1848, by John Jay Putnam, printed for the author by F. S. Blanchard & Co.—Some time since,

Mr. Putnam came into possession of certain papers pertaining to the old town of Petersham, and among them he found the records of the Lyceum, which had a useful existence of fifteen years. Very likely nearly every township in the Commonwealth could tell an equally interesting story were the documents to be found. At any rate it is impossible to overestimate the value of the Lyceum to the period when it flourished. Worcester came in for her share of benefits, and many a man prominent in public life goes back to the inspiration and instruction, as well as drill, of the Lyceum for his starting-point.

The City of Kingston, the Birthplace of the State of New York, by Howard Hendricks, published by the Kingston Board of Trade.—In putting forth this pamphlet of seventy-odd pages, the projectors have paid a beautiful tribute to their past as well as present. Profusely illustrated, it takes up the story of this old Dutch town and city and tells the reader most entertainingly the why, where and what of Kingston's record. Few people are aware of the conspicuous part borne by this place in the early days of New York State. Here her constitution was promulgated, and here George Clinton was inaugurated Governor. An old stone house, erected in 1676, in which, in 1777, the first State Senate was organized, is still standing, and is one of the notables of this Hudson River city. The Board of Trade has done well in thus calling attention to the merits of the ancient place.

The Southern Workman for October.—This sterling organ of the Hampton Institute is as full as ever of instruction and inspiration. Among its valuable articles may be noted, "The Hart Farm School," "Summer Schools of the South," "Indian Day Schools," and "Mrs. Clayton's Cooking School." "Southern Agriculture and the Negro" is of special interest, setting forth the material advancement of the Freedman.

The Four-track News, representing the New York Central System of Railways, in its October issue, has something for nearly every taste. History, scenery, narrative and description, all have their parts. The reader may in fancy travel through the Empire State, down the St. Lawrence, look through Pittsburg, get a taste of Japan, hunt moose in Maine, look up the Egyptian Obelisk, visit the homes of Ohio presidents, roam with an artist in France, inspect the old home of Whittier in Amesbury, and yet not exhaust the contents of this excellent number.

The Royal Blue, from the Baltimore & Ohio Railroad, presents its usual beautiful exterior and an interior quite up to the standard. The end of the Grand Army reunion in Washington lessens the number of war pictures, but the subject-matter is no less entertaining. Telegraphy has a very instructive setting forth, both in type and picture; President Roosevelt has a passing page or two with illustrations; West Point, N. Y., is remembered, and Autumn Days at Atlantic City lessens one's regret that the summer has ended. Louis Kossuth, by figure and description, arouses memories of quite fifty years ago, while an article on the early days of Washington presents our national capital in an attractive manner.

Announcement.—Houghton, Mifflin & Co. of Boston, New York and Chicago send out an excellent list of books to be expected in the immediate future. Among the authors named are noted T. B. Aldrich, Elizabeth Stuart Phelps, Arlo Bates, John Fiske, Col. T. W. Higginson, Chas. Egbert Craddock, John Burroughs, and many others. The firm very seldom, if ever, publishes anything not of a high order, and the autumnal list is a valuable addition to the already extended array of New England's greatest book-making house.

Sunset, a magazine of the border, the far-away Pacific coast, sends its October installment in better form than ever, if that be possible. The first article is an excellent description of the University of California, in which Worcester people should take an unusual interest from the fact that one who had been a Worcester boy, the Hon. Horace Davis, was for several years its President. Other distinctively western coast articles are "Santa Clara Mission and College," "Independence Lake," "High Sierra and Expert Fly-casting." Published by the Southern Pacific Railroad Co., San Francisco.

American Ornithology.—This delightful product of Worcester genius and industry presents in its October number matter for study and pleasure. The saucy kingfisher which sits upon the cover is described at length both by pen and picture. The rose-breasted grosbeak and the redstart are also served up, with others equally interesting. The book must be invaluable to those who love the subject.

WORCESTER WOMAN'S CLUB

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The Worcester Woman's Club held its first meeting of the club year in Tuckerman Hall Oct. 8. Prof. Charles E. Fay of Tufts College gave an illustrated lecture on "The Nibelungen Lied."

The Club has once more met a loss in the death of one of its valued members, Mrs. Adeline S. Greene.

This programme of the Club year was announced as follows:

Oct. 29. Education: "The Life That Counts," Mrs. Florence Slocomb; "The Advantages and Perils of Club Life," Mrs. Ellen A. Kimball.

Nov. 12. Work: "Municipal Parks and Playgrounds," Miss Georgie A. Bacon; "Juvenile Offenders," Mrs. Callie H. Davis; "Public Health," Dr. Mary S. Holmes of the Isolation Hospital.

Nov. 26. Art and music: "Arts and Crafts," Mrs. Ellen Tiffany Brockway of New York.

Dec. 10. Business.

Dec. 31. Miscellaneous, opera recital, Manru-Paderewski, Walter Bogert.

Jan. 14. Science: Dr. Hermann Von Schrenk of the United States Bureau of Forestry.

Jan. 28. Literature: "Twentieth Century Dramatists," Mrs. Carrie Gordon Leland, Mrs. Annie Russell Marble, Mrs. E. B. Higgins.

Feb. 11. History: "The Maya People," readings from Queen Moo's Talisman, introducing melodies by the author, Mme. Alice Le Plongeon.

Feb. 25. Art and music: Music by Club members.

March 11. Miscellaneous: Papers to be announced.

March 25. Work: Miss Jane Addams of Hull House, Chicago.

April 8. Business.

April 22. Science: Papers to be announced.

May 13. Education: "St. Francis of Assisi," by Prof. Edward Howard Griggs.

May 27. History: French historical costume recital by Club members.

June 3. Annual meeting.

The Club has been asked to send a delegate to the conference of the Massachusetts Floral Emblem Society at Faneuil Hall, Boston, Oct. 31, but no action was taken on the matter. The circular from the State Federation was read. In brief it is as follows:

By invitation of the Newton Federation of Woman's Clubs the State Federation will meet in the Central Congregational Church, Walnut Street, Newtonville, on Friday, Oct. 31, at 10.30 a.m., subject, "Women and Children in the Industries."

Morning Session: "Conditions Throughout the Country," Horace G. Wadlin, chief of the Massachusetts Bureau of Statistics of Labor.

Afternoon Session, 2 o'clock: Speaker, Miss Sadie American of New York. Subject to be announced.

Mrs. Denison, president of the General Federation of Woman's Clubs, and Mrs.

Lydia P. Williams, ex-president of the Minnesota Federation, and director of the General Federation, will be present and speak.

Other speakers will be announced later.

These announcements were made: The arts and crafts class will meet Monday at 4.30 p.m. in the Salisbury Street suite. Miss Matie P. Clark of the Oread will talk on "Basketry." If fifteen desire it, a class will be formed. The clubhouse corporation announced two lectures by Mrs. Charles W. Rhodes: Oct. 30, on "Wagner and the Bayreuth Festival," and Oct. 31 on "Historic Castles, Chateaux and Cathedrals of France," with musical illustrations by Adolph Glose. Tickets may be obtained at Steinert's, and there has been a large demand for them. The Education Committee is to send a traveling library to one of the Carolinas, and Club members were asked to contribute books, which may be left with the custodian, Mrs. A. A. Wood, who will be at the clubhouse every day from 9 to 12 a.m., and from 2 to 5 p.m. Cook books, histories, good fiction, Youth's Companion, St. Nicholas, and like papers and magazines will be accepted. Until members are given keys it will be possible to gain entrance to the clubhouse only by ringing the bell. The Dutch suite will be open to members, but other suites will be closed except when in use. Mrs. Anna Thompson will be in the Dutch suite Tuesday afternoon to meet those who desire to join French or German classes. Prof. Albert Pernot will be the instructor in French as last year, and Fraulein Kurkenmeister in German. The class in voice culture, with Miss Florence Mabel Scott of Dean Academy, will be under the auspices of the miscellaneous department. This class will begin its course about the middle of November. Names may be sent to Mrs. W. T. Forbes, 23 Trowbridge Road. The drama class will meet Oct. 16 at 10 a.m. Marlowe's "Edward the Second" will be the subject. Mrs. Annie Russell Marble will conduct the class.

The chairman of the Vacation Schools Committee, Mrs. Melora F. Pratt, reported the work of that committee during the summer of 1902:

The vacation manual training schools have differed in one important particular from that of previous years. The teaching staff was identical with that of 1901, and the number of the classes and the hours of the sessions were unchanged. In respect to the scheme of work, however, a radical departure was made from the former somewhat rigid course. In place of a fixed progression of exercises embodied in a series of articles, each of which must in turn be made by every boy, the attempt was made to bring out, if possible, some expression of individual preference, some inventive or adaptive suggestion which could be worked out by its originator to the exclusion of everything else. The first few lessons were given uniformly to every class to insure a sufficient degree of knowledge of the different tools and skill in their use, after which no effort was made to treat the class as a unit, each boy being encouraged to suggest some article which he would like to make. The resulting suggestions were exceedingly diverse, and included stilts, boats, kites, letter-boxes, money-boxes, stools, trays, checker-boards, picture-frames, and many other small articles. The most popular project was a set of racquets and net-posts for table tennis, and more than half the boys were able to make a complete outfit for the game, which would then have a heightened interest for them on account of their personal achievement.

The interest this year has been even more noticeable than before, but whether due to the change in method of instruction or to fortuitous circumstances, it is impossible to say. The figures show that a larger number of boys have remained throughout the entire term, and a far larger proportion have been perfect in attendance. As in previous years it will be seen that the morning sessions are the more popular and more regularly attended, the principal reason being that counter attractions are so much less frequent in the morning than in the afternoon.

Statistics for term of 1902: Length of term, from July 7 to August 8, inclusive. Record of attendance at Walnut Street: Hours of classes—8.30 to 10.15 a.m.; 10.15 to 12.00 a.m.; 1.00 to 2.45 p.m.; 2.45 to 4.30 p.m. Percentage of attendance by classes: 8.30 class, 95.7 per cent.; 10.15 class, 95.2 per cent.; 1.00 class, 90.2 per cent.; 2.45 class, 91.3 per cent. Average attendance, all classes, 93.1 per cent. Total number of boys in attendance, 116. Number registered for full term (five weeks), 68; perfect in attendance, 39.

It is satisfactory to note that of the 96

boys enrolled at the beginning of the term 68 remained until the close, and that of these faithful ones 54 per cent. were unfailing in their attendance, a record surpassing all previous years.

Record of attendance at Millbury Street: 57 pupils enrolled; percentage of attendance, 91.1.

STANLEY H. ROOD.

VACATION SCHOOLS.

The vacation school is no novelty. It has already been adopted as a part of the public school system in many cities, while in others it is under the support of some individual or club. However supported, it is universally conceded to be a step in the right direction. A vacation, which is practically one-fifth of the year, is welcomed by the parent who can afford to take his son or daughter to the country or shore, but to the mother who is constantly employed outside the home, it is an anxious time. Beside these parents there are others who do not care where their children are, so long as they are not disturbed by them, and for these we must be father, mother, friend, and find suitable employment for these idle hours. Statistics prove that it is from this class that criminals are made, and especially during this vacation time. The girls perhaps are somewhat better off, since they are more apt to have household duties, or the care of younger children, but the boys have many idle hours.

New York, Chicago, Philadelphia, Boston, Hartford, Springfield, Lowell, and other cities publish each year most interesting reports of their vacation schools. This year the Woman's Club attempted nothing new, but as in previous years supported six classes in manual training for the boys, these taught by the regular teachers, and three sand-gardens, carried on by young women well recommended and some of them already in public school work. The School Board allowed the use of the buildings and yards, only one change being necessary. One sand-garden was transferred from Shrewsbury to Sycamore Street, neither the committee nor the teachers being willing to occupy a building not under the direct supervision of a janitor, for the janitors have proved themselves most able assistants. The applicants for the manual training schools were many, more than could be accommodated. The vacancies were quickly filled, and the attendance was good. Many personal applications were made at the schools, and at the close of the session a large number begged to be remembered another year. At Millbury Street plant-sticks, coat-hangers, coat-racks, rollers, towel-racks, boxes, and ping-pong sets were made from whitewood, and paper knives and pen-holders from sweet gum, with occasionally a special article from an original design. One boy, a cripple, whose teacher felt doubtful if he could stand at the bench, was one of the most interested pupils. The most friendly relations were established between teacher and pupil, and only two cases requiring discipline were reported. The mere fact of being able to make some useful article was sufficient to employ all their energies, to keep them busy, and to make them happy. Many boys procured a few tools and continued their work at home, which, of itself, was an evidence of their interest. Mr. Stanley H. Rood, as in previous years, had oversight of all the manual training, and our one regret is that one so well fitted for the grand work of teaching should have been secured for the Hartford schools. His patience was unbounded, and he was always ready to assist the earnest pupil. The sand-gardens were well patronized by the younger children, some being content to play in the sand, while others joined classes in sewing or basket-making, or cut out pictures to be made into scrap-books for the hospitals. The raphia and rattan baskets were popular with both boys and girls, and some very good work was done. Dolls were contributed, some by the Benevolent Society of the First Unitarian Church, and some by members of the committee, and all were neatly dressed under direction of the sewing teacher. These were given to the girls who took the greatest pains and made the most marked improvement in their work. A few boys received as a reward for good behavior and for being especially helpful, some books given for that purpose. A noticeable feature at one school was a lend-a-hand club, consisting of some of the older girls, who brought, cared for, and took home again some little children whose mothers were obliged to leave their homes at an early hour in the morning and so could not bring them themselves. The games each day attracted both boys and girls, and gave the necessary relief from the class work. The average attendance at Sycamore Street was sixty, at Thomas Street one hundred and fourteen,

and at Lamartine Street one hundred and eighty-eight. Each and every teacher seemed interested, and to one and all the committee is grateful. The sand-gardens closed with songs, recitations and musical selections, many of the parents being present. In two of the buildings refreshments were served by the teachers. Some of the members of the school board took the opportunity to make themselves familiar with the work. Many of our public-spirited citizens kindly added their subscriptions to the memorial fund ($338.15), raised in memory of Miss Sarah A. Henshaw, a prominent member of the Vacation Schools Committee since the inauguration of the work.

Others contributed sand, lumber, pails, shovels, balls, pipes, scissors, and a long and varied list of articles. Without all these kind friends the work could not have been accomplished this year. With sufficient means it might be extended. If the committee were asked to make any suggestion for the future, they would be in the line of centralization. At Lamartine Street, for instance, where evidently the greatest need exists, we might use the entire building for classes of various kinds, reserving the yards for the especial use of the younger children. This suggestion is for the sand-gardens only, as the manual training could not be better arranged than at present. It must necessarily be taught in the buildings equipped for the work and by the regular teachers. We would also advise that members who belong to the Club, which is supporting these vacation schools, and the parents, whose children are benefitting by them, should visit occasionally and so encourage both teacher and pupil. We feel sure that these schools have come to stay, and we trust that all who are interested in good citizenship will lend a hand for their improvement and extension.

Respectfully submitted and signed for the committee.

Melora F. Pratt, Eldora M. Aldrich,
Helen A. Ball, Florence W. Smith,
Ida M. Chandler, Annie D. Logan,
Louise West Rice, Edgenie B. Higgins,
Ellen F. Woodbury, Emily J. Williams.

The memorial fund to Miss Henshaw has since the annual meeting been increased to $358.65.

It was voted by the Club to allow the work department, Miss Averill, chairman, to sell tickets to Rev. Mr. Dole's course of lectures to non-members of the Club.

It was also voted to hold a simple Club tea on the second meeting of each month throughout the Club year.

It was voted that members of the waiting list be entitled to class privileges on payment of a larger fee than that required of Club members, this fee to be determined by the department incurring the expense.

The vacancy on the executive board caused by the election of Miss Bacon as President of the Club, was filled by the election of Miss Nella Marble.

Fifty dollars was voted for the work of the Committee on Public Schools.

There being three vacancies on the Extension Work Committee, Mrs. Elizabeth H. Wattie, Mrs. Prue C. Gordon, and Mrs. Sarah Legg were chosen as members of that committee.

What People Might Think.

The autumn is old;
  The sere leaves are flying;
He hath gathered up gold,
  And now he is dying.
—Thos. Hood.

AS long as the present generation lives, the season of 1902 will always be associated with the coal strikes. Neither one a cause nor an effect, yet in every way they have seemed to go hand in hand. Doubtless the careful treasurer of weather data is able to parallel the cold summer just ended, but the average citizen says with emphasis, "Nothing in my lifetime has begun to equal this." Then he will proceed to remark on the singular coincidence that a scarcity of coal has accompanied every step of the season's march.

HAPPILY, the summer, such as it was, is ended, also the strike which kept it company. For some months the weather, ever the stock theme of conversation, gave place to the more important subject of coal. Whenever a more than usually animated harangue was in progress, it was quite easy to determine the question under consideration. The king's English, as well as every patois spoken in America, has had a sad wrenching in the speaker's efforts to do justice to the paramount topic. John Mitchell divided honors with President Baer as the one altogether lovely or the reverse, according to the viewpoint of the speaker.

NOT till the political situation became imminent did it appear to dawn upon the minds of those in authority that something might be done to hasten negotiations between the two great parties directly interested. We have seen the President of the United States calling a conference of the chief representatives of both strikers and operators to try to effect a settlement. How much longer this effort might have been delayed had there not been a national election impending, no one knows. The woes of the household are of little importance in comparison with the exigencies of a great election. But the effort of the President himself seemed futile till public opinion began to speak in no uncertain tone.

THEN, and not till then, did the operator, who claimed to have a divine appointment, and the striker, who would not yield a hair unless his union was recognized, cease shaking metaphoric fists in their respective faces and agree to abate a few of their claims and submit their differences to the arbitrament of disinterested and discriminating men. Meanwhile, the public, neither capitalist nor laborer, but just a plain consumer, has been much like the matter between the upper and the nether stone. While these two great combinations have been struggling as to the output of a necessity, the consumers, if not ground exceeding small, have at least been subjected to a squeezing far beyond the pleasure degree, and the situation is giving great prominence to the question, "What rights, if any, have consumers in the constant struggle between labor and capital?"

THE contest is by no means confined to the coal fields of Pennsylvania. All over this great nation we are constantly reminded of another irrepressible conflict, and as yet no William H. Seward has arisen to lead the people out of bondage. The conflict is on—there can be no doubt as to that; few strikes thus far have ended in anything better than a compromise; there has been no adjustment that may be used as proper precedent in time to come; everything so far has been mere temporizing. Will there be, can there be, an effectual and permanent settlement? When the day of adjustment comes, if it ever does come, who is to stand forth as the special champion of those who might with propriety say, "A plague o' both your houses," since, while the combatants fight, the consumer starves or freezes?

THERE are laws and machinery enough to settle all the difficulties, but when most needed neither laws nor machinery operate. Somehow they appear to retire into desuetude, not entirely innocuous. The picture presented for the future historian of this era to describe is a peculiar one. He will see law-makers and executives galore, arbitrators and commissioners of labor, yet the struggle goes gaily on, just as though no one outside of the combatants had any interest in the fight. Not until a political issue is imperiled does it seem worth the while of authorities to wake up and do something. Forty years ago the pride and strength of America, the northern part of it, went southward in defence of a principle whose success or failure concerned them very little, if any, personally. They had never been hungry nor cold on account of slavery, but they laid down their lives for its extinction. Now the major part of our people have been confronted with hunger through the beef combine, and with cold through the Pennsylvania embroglio, but survivors and their sons of the memorable struggle of '61-'65 are as whist as mice. The giant still sleeps, but his effectual awaking may breed trouble for them through whom these offenses have come.

ONE of the most discouraging features of the entire season of strike anxiety has been the readiness of retail coal dealers to respond to every opportunity and excuse to elevate the price of their stock, though the same may have been obtained before the trouble began. Higher and higher have they gone till they have become well nigh prohibitive to people of limited incomes. A special dispatch from the town of Palmer to the Worcester Telegram exalts the name of a local dealer who, finding himself in possession of 400 tons of hard coal, refused all offers of speculators and continued to sell his stock to regular customers at practically the old rate. We live in a land where the Golden Rule is supposed to be the one chiefly in force, but if so, since the coal strike began, it would seem that David Harum's version thereof was the one respected; but in Palmer it would be very strange if, when the anthracite operators have established their agencies as is foretold, the people do not stick to a man who remembered those in bondage as bound with them. They certainly will, unless gratitude has fled to brutish beasts. In our own city of Worcester it is remarkable that "soulless corporations" are the ones to take up the cause of the oppressed and to offer coal at cost.

OCTOBER 9th was a prominent day in the yearly round of Worcester events, since on that day was inaugurated the new collegiate department of Clark University. Never did the south end edifice house such an audience as that which assembled to hear and see all that pertained to the opening. The begowned members of the faculty were impressive, and the presence of the two United States senators from Massachusetts, if anything else were lacking, betokened the importance of the event which had gathered representativs from all our educational institutions, both public and private, to do honor to the day and the cause. The address of President Wright is given in full; those of the other speakers were no less felicitous and pertinent. The craft was launched, if not with the cheers of the beholders, at least with the very best wishes of all concerned. The entering freshmen number twice as many as had been expected at the onset. While the curriculum in its application is calculated to make an old college man stand aghast and excite wonder as to why he spent so many days on Greek and Latin, the most conservative of the number is not ready to say that the new college may not be right. The new century is bringing in many innovations, and perhaps that of eliminated and abbreviated college courses are among those to succeed. We shall see.

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Board of Trade Notes.

The Advertisers' Protective Association is an assured success, as a large number of prominent business concerns of the city have already joined and new names are constantly coming in. All business houses having representatives in the Board of Trade should improve this opportunity to help themselves.

The rooms of the Board of Trade are gaining in popularity among those seeking convenient meeting-places near the heart of the city.

A list of the members of the Association will be printed in pamphlet form as soon as complete, and mailed to each member.

Merchants who desire to secure the benefits of this association and are not now members of the Board of Trade can join the Board at any time. Some have already done so.

President Blodget is very enthusiastic over the work done by the Philadelphia Commercial Museum, of whose advisory board he is a member, and whose recent meeting he attended. From the discussions there relating to the foreign trade of the United States, in all its multiform phases, suggestions were received which can not fail to be of use in our Worcester manufactures.

The smoke talk given by Mr. St. Elmo Lewis was well attended, and will be reproduced in full in the next number of the MAGAZINE. The regular winter course of smoke talks will follow as usual, and a large attendance of the members is solicited. The most prominent speakers obtainable will address the several meetings.

The new-building project is still in the hands of the Ways and Means Committee, which is looking into the matter fully, and will probably report at the next meeting of the Directors.

The Board of Trade Glee Club will give its first concert in Tuckerman Hall, Woman's Club house, Tuesday, Dec. 2, notice of which will be sent to the members in due season. They have also been engaged to give one of the entertainments in the Mechanics course, and for the third year in succession will go to Milford.

We are also able to announce that the club has been engaged to sing at the annual banquet of the Home Market Club, Boston.

NATIONAL BANKS.

CITIZENS' NATIONAL BANK, 342 Main Street. Incorporated as a State Bank in 1836; as a National Bank in 1865. Capital $150,000; surplus $84,000. Dividends April 1 and October 1: rate past year, 6 per cent. President, Henry S. Pratt; Cashier, George A. Smith; Directors, Henry S. Pratt, George B. Buckingham, Samuel E. Winslow, John C. MacInnes, William H. Crawford, Burton H. Wright, Herbert Parker.

FIRST NATIONAL BANK, 474 Main Street. Incorporated in 1863. Capital $300,000; surplus and undivided profits $200,000. Dividends May 1 and November 1; rate past year, 10 per cent. President, Albert H. Waite; Cashier, Gilbert K. Rand; Directors, Arthur P. Rugg, Ransom C. Taylor, William H. Sawyer, Albert H. Waite, Orlando W. Norcross, William H. Inman, J. Russel Marble, Frederick E. Reed, Charles H. Morgan.

WORCESTER NATIONAL BANK, 9 Foster Street. Incorporated as a State Bank in 1804; as a National Bank in 1864. Capital $250,000; surplus and undivided profits $240,000. Dividends April and October; rate past year, 8 per cent. President, Stephen Salisbury; Cashier, James P. Hamilton; Directors, Stephen Salisbury, A. George Bullock, Charles A. Chase, Lincoln N. Kinnicutt, Josiah H. Clarke, James P. Hamilton, Edward L. Davis.

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WORCESTER SAFE DEPOSIT AND TRUST COMPANY, 448 Main Street. Incorporated in 1868. Capital $200,000; surplus $100,000. Dividends January, April, July and October; rate past year, 6 per cent. President, Edward F. Bisco; Secretary and Treasurer, Samuel H. Clary; Directors, John H. Coes, Edwin T. Marble, Edward F. Bisco, Henry F. Harris, Charles S. Barton, Charles A. Williams.

SAVINGS BANKS.

PEOPLE'S SAVINGS BANK, 452 Main Street. Incorporated in 1864. Deposits $8,985,436; guaranty fund $400,000. Interest payable February and August 15. Deposits go on interest February, May, August and November 1; rate past year, 4 per cent. President, Samuel R. Heywood; Treasurer, Charles M. Bent; Investment Committee, Samuel R. Heywood, Edwin T. Marble, Alexander DeWitt, Wm. W. Johnson, Henry F. Harris.

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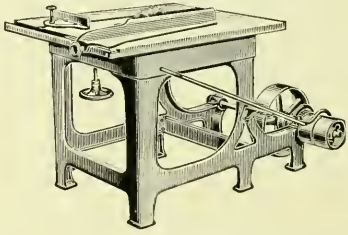

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The Blanchard Press
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THE WORCESTER MAGAZINE

DECEMBER

1902

DEVOTED TO

Good Citizenship and Municipal Development

PUBLISHED MONTHLY BY THE BOARD OF TRADE

WORCESTER, MASSACHUSETTS,

U. S. A.

B. W. CARLOW & CO.,

INVESTMENT SECURITIES

520-521 State Mutual Building, Worcester.

BOSTON. **NEW YORK.**

GENERAL JOSIAH PICKETT
in his Mechanics Hall Portrait.

The Worcester Magazine.

Vol. iv. DECEMBER, 1902. No. 6.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

General Josiah Pickett and His Portrait.

NEARLY every one is sure of having some good things said of him after the battle of life is over and mortality has put on immortality. Then the old Latin saw, "*De mortuis nil nisi bonum*," is remembered, and fulsome adulations are found where, only a brief period before, anything but praises abounded. To a few, a very few, is given the special pleasure of hearing their own eulogies pronounced while yet in the flesh and ready to catch the sound of familiar voices. Brooklyn, N. Y., gave to her Ex-mayor Stranahan the unexampled distinction of a bronze statue while the good man lived, and Worcester accords to one of her favorite citizens a place upon the walls of her magnificent Mechanics Hall, while the subject is amply able to climb the stairs and see how his semblance looks suspended there.

Nor was this action quite unprecedented in this city, for Henry W. Miller, an original member of the Mechanics Association, and Elbridge Boyden, the architect of the hall itself, might have seen their own figures there displayed. Through happy discrimination the hall has grown to be Worcester's Valhalla, and a place in one of its niches assures to its occupant something akin to immortality. Thus far, every name borne by the frames in that almost sacred space is hallowed by associations in city, state or nation. An ability to tell the story of each and every man who is thus remembered indicates a liberal education, not alone in political life, but in the even more important pursuits of arts and industry.

For many a long year the faces of Governor Andrew and Gen. George H. Ward had looked down on assembled multitudes, and later they were joined by those of Garfield and Sergeant Plunkett, all of them suggesting occasions when the very nation held its breath over impending peril. The name of Ward always recalls the Fifteenth Regiment of Massachusetts Volunteers and that terrible second day at

Gettysburg when he yielded up his life; few visitors to the hall are ignorant of the story of the Twenty-first Regiment at Fredericksburg and that brave charge where gallant Tom Plunkett became armless in his effort to save the flag of his country. Thus two of the organizations which went out from Worcester County had reminders in this conspicuous place. Need there be any wonder that the devoted followers of Josiah Pickett, who so proudly had led the Twenty-fifth, began to moot the project of a memorial to their Colonel before his final muster out? They realized that his next birthday would put him at a full four score, and if he were to see himself depicted by an artist it should be done soon. For the veterans residing in Worcester and vicinity it did not take long to reach a decision, and after a preliminary canvass among some leading citizens and the securing of General Pickett's consent to go ahead, which, by the way, was the most difficult task of all, a meeting was held, a committee appointed, and the work began. All this was early in May. It having been determined that the giving for the portrait should be confined to veterans of the Twenty-fifth, the circulars which were sent out May 20 were mailed only to them. The responses were so ready and enthusiastic that inside of four days the plan was deemed successful, and the formal commission to paint the portrait was given to J. Madison Stone, director of drawing in the public schools of Worcester, himself a veteran of the Twenty-first and, at the same time, the artist who had given the semblance of the "Armless Sergeant."

The summer months saw the work progress through crayon sketch to color and the finish, and many a veteran who had vivid recollections of the days when his Colonel looked just as Artist Stone has depicted him took the elevator to the uppermost story of the Knowles Building, just to see how the work was getting on. There was a general agreement that the same was going well, and finally came the frame from Boston and the inspection of officials from the Mechanics Association. The next thing in order was the presentation, and this was set down for the 30th of October, when the veterans would assemble to celebrate their forty-first anniversary of departure from Worcester. As the event was to be an unusual one, invitations were issued to representatives of the regiments that had gone from Worcester County, and they generally responded. As the portrait was so soon to become the property of the Association, it was deemed best to have the reunion in Washburn Hall, instead of Horticultural, as had been the custom. Upon the platform stood the frame, covered with the starry banner. Care had been taken to have lights arranged for its proper showing when the flag should fall. The "boys" were out in force, and they crowded the tables, which were loaded with the viands provided by Caterer Yeaw. At the centre of the chief table sat the President, erstwhile Colonel and General, not armed *cap-a-pie*, but in plain garments of peace, to receive and greet his followers of auld lang syne. Seated at the north end of the same table was Sergeant-major Charles Davis, whose liberal donation had early placed the project beyond the shadow of failure, and all were glad to see and greet him. Near by was the artist, J. M. Stone, and the day was one of triumph to him as well as to the officer in whose behalf the unusual features of the reunion were planned. While old as well as young soldiers are proverbially hungry, it was evident that all were anxious to know what the flag concealed, hence when the

President introduced Gen. A. B. R. Sprague, to whom had been delegated the office of presentation, all were on the *qui vive* for what might follow. Nothing could have been more appropriate than the selection of General Sprague for this task, since he and General Pickett had been comrades in their militia days, in the Third Battalion, and in the formation of the Twenty-fifth they had ranked as Lieutenant-colonel Sprague and Captain Pickett. Now it was the privilege of the former superior officer to honor his old compatriot, and most eloquently did he respond. After saluting General Pickett, presiding, he addressed himself to President E. M. Woodward of the Mechanics Association, saying:

President Woodward and Gentlemen of the Board of Trustees of the Worcester County Mechanics Association.

Honored by your presence, we bid you a cordial welcome to this assembly of veterans. We are the "boys of '61," spared by a merciful Providence to meet again in that reunion which is only known to comrades who have shared together by land and sea, by day and by night, year after year, the perils incident to a great war. To the written record of the Civil War, the aid of the sculptor and painter has been invoked to illustrate and emphasize the patriotic service of some of the representative soldiers and sailors who honorably participated in the great conflict. Soon a bronze equestrian statue of Gen. Charles Devens, the soldier, jurist and statesman, will stand in front of our Court House, and should prove an inspiration to all who gaze upon it.

Upon the walls of our beautiful Mechanics Hall hang the portraits of many distinguished men, from Washington to our own time. There is the familiar face of Lincoln, of Garfield, of John A. Andrew, the great war Governor of Massachusetts, of Gen. George H. Ward of the Fifteenth, and Sergt. Tom Plunkett of the Twenty-first.

In this hall on the 20th of April, 1861, the Third Battalion of Rifles assembled to receive an official farewell from the Hon. Isaac Davis, then Mayor, and a blessing from the Rev. Alonzo Hill. Here were the great war meetings held from time to time, and to the eloquent appeals for volunteers 3000 young men, more than one tenth of the entire population of the city at that time, joined the serried ranks to do or to die in the service of their country.

The survivors of the Twenty-fifth Massachusetts Volunteers, one of the best and bravest regiments the Commonwealth sent to the front, have long desired that in this historic place and among these portraits should be that of their beloved commander, Gen. Josiah Pickett.

Gen. Josiah Pickett came to Worcester in 1855. Identifying himself soon after with the City Guards, he became its First Lieutenant, and with it responded to the first call for troops in April, 1861, forming a part of the Third Battalion of Rifles, Major Devens commanding. Returning from the service, he was appointed Captain of Company A, Twenty-fifth Massachusetts Volunteers.

This regiment was a part of the famous Burnside expedition to North Carolina, and participated in the battles of Roanoke Island and Newberne.

Upon the resignation of Major McCafferty, General Pickett was promoted to be Major, March 20, 1862.

By the promotion of the Lieutenant-Colonel to the command of the Fifty-first Regiment, in the autumn of the same year, and later by the resignation of Colonel Upton, Major Pickett was commissioned Colonel Oct. 29, 1862, just one year after the regiment left Massachusetts.

In the Goldsborough campaign and in subsequent active military operations in North Carolina, and as commander of the forces at Plymouth on the Roanoke and the sub-military district of the Pamlico, he tendered most efficient service until December, 1863.

The Twenty-fifth was assigned to the army of the James and operations south of Richmond during the spring of 1864. He gallantly led it in all the engagements in which it participated, and

through the terrible fire of shot and shell in the fruitless charge at Cold Harbor, June 3, 1864, where he was severely wounded and the brave regiment lost in killed, wounded and captured about 70 per cent. of the 300 present for duty.

Disabled from further active military duty, Colonel Pickett retired from the service Jan. 10, 1865, carrying with him the high esteem and affectionate regard of the officers and men who, under his command, had performed their duties so faithfully and fought so gallantly to sustain the honor of the flag they had never surrendered, and the supremacy of the Government which they had defended with their lives.

At the close of the war General Pickett was brevetted Brigadier-general of United States Volunteers, to date from June 3, 1864, for gallant and meritorious conduct during the war, especially at the battle of Cold Harbor. This honor and distinction was the result of his native force of character and personal bravery.

His services in civil life have been invariably efficient. While holding an office in the custom house, he was appointed in September, 1866, Postmaster of Worcester, and for more than twenty years held the office to the satisfaction of the public.

In 1889 he was appointed by Governor Ames a member of the State Armory Commission, under whose direction was built the Worcester Armory and others in the Commonwealth, and he still continues in this service.

In 1894 he was appointed a member of the License Commission, and was its chairman, and was reappointed each successive year until the present, faithfully discharging the perplexing duties of this office.

In all these different positions fidelity to duty has been his strong characteristic, and to his bravery, efficiency and loyalty I can bear personal testimony.

To participate in this service to-day gives me peculiar pleasure, as the only survivor of the original field staff of the Twenty-fifth Regiment, and as the personal friend of General Pickett for nearly half a century. In ante-bellum days we were comrades in the Worcester City Guards, and with them responded to the first call for troops. Of the eighty-four who went with us, less than twenty are living. Jointly interested in the raising of the Twenty-fifth Regiment, we went with it bound by the strong ties of early service. Separated in the later service by the fortunes of war, we returned to the old home again after the victory—

"Friends in early manhood, when the dawn was bright,
Friends in the heat and burden of the day."

Gentlemen: In behalf of my comrades, the survivors of the Twenty-fifth Regiment, Massachusetts Volunteer Infantry, I have the honor to present through you to the Worcester County Mechanics Association this war-time portrait of Gen. Josiah Pickett, painted by J. Madison Stone, a veteran of the Twenty-first Massachusetts Volunteers, to the end that it may find a fitting place upon the walls of Mechanics Hall, and that it may show that the man who bravely meets the duty of the hour, either in war or peace, is worthy of the loyalty of his friends and the gratitude of the people.

In the middle of the last paragraph the flag fell from the frame and the splendid painting stood forth in all its beauty. The men could not wait, but sprang to their feet, and cheer after cheer rang through the hall at the sight of their former commander as they knew him in days of old. It was an hour worth living for any man, and no wonder that General Pickett's face blanched as it had never done in the face of a foe. When the air had cleared sufficiently, General Sprague finished his remarks, and President Woodward, rising, replied as follows:

Survivors of the Twenty-fifth Regiment, Massachusetts Volunteers.

Responding for the Worcester County Mechanics Association, I desire to direct your thoughts back to the years 1828 to 1855, inclusive, a period of twenty-eight years in which were laid the foundations of the great commerce of Worces-

ter, and that of an institution which has accomplished much for the development and prosperity of our city; in 1828 the Blackstone Canal, in 1835 the Boston & Worcester Railroad, in 1839 the Western Railroad to Springfield, and in 1840 the Norwich & Worcester Railroad, respectively, were completed and operated.

A few thoughtful and energetic men of these days saw the need of an institution that would assist in the moral, intellectual and social improvement of its members and the perfection of the mechanic arts; hence, in the year 1842, the Worcester County Mechanics Association was organized. In 1855 the corner-stone was laid for Mechanics Hall building, and two years later this building was completed, a monument of skill and courage of our Worcester County mechanics of 1855 and '57.

Your comrade and our associate, Gen. Josiah Pickett, selected Worcester for his home, and came here in the year 1855, the same year in which was laid the corner-stone of Mechanics Hall building; and at this time he unconsciously laid the corner-stone of a foundation on which have been built the love and respect of his associates and the deep gratitude of the citizens of Worcester, the State and the nation, for gallant services rendered our nation in time of war.

General Pickett was elected a member of Worcester County Mechanics Association April 20, 1871, and became a life member in 1896, and we thank God that his name stands to-day on the membership roll of the living. He is a witness of the great progress in Worcester, of our commerce and the assistance rendered by our Association in promoting to a high standard the mechanic arts.

Mechanics Hall, from the time of its completion to the present, has been a place for the people to assemble for amusements and socials, to listen to words of instruction, inspiration and patriotism. The eloquence, intellectual, religious and patriotic utterances that have flown from the lips of very many earnest and renowned speakers have reverberated within its walls, and stirred the spirit of man.

On its walls are the portraits of illustrious men who have performed nobly their part in the drama of life, the memory of whom we sacredly cherish and highly esteem — George Washington, Abraham Lincoln, James A. Garfield, John A. Wilson, Gen. George H. Ward, Sergt. Thomas Plunkett, William Lloyd Garrison, James B. Blake, Ichabod Washburn, William A. Wheeler, Benjamin Walker, Henry W. Miller, Eldridge Boyden and John B. Gough, a most appropriate place for the portrait of the gentleman whom you to-day honor.

In behalf of the Worcester County Mechanics Association, and by the authority of its Board of Trustees, I accept from the survivors of the Twenty-fifth Regiment, Massachusetts Volunteers, this portrait of Gen. Josiah Pickett, which shall be placed on the wall in Mechanics Hall, guarded with care, and the memory of him whom it represents sacredly cherished.

In receiving the same, we appreciate its value as a token of your high regard for your comrade, and the honor you have conferred on our Association, which tenders you its sincere thanks.

The Worcester County Mechanics Association tenders its greeting to General Pickett, with its best wishes for his welfare and happiness, and is proud to participate in rendering him honor to whom honor is due, to one of its members.

In behalf of our Board of Trustees, I thank the Twenty-fifth Massachusetts Regiment Veterans' Association for its cordial invitation to attend the thirty-seventh annual reunion.

The management of affairs returning to the hands of President Pickett, he valiantly attempted to express the feelings with which all could see he was thoroughly charged, but, for once in his life, the General came near giving up. However, his confusion was greatly to his credit, and his old "boys" loved him all the more because he had trouble in telling how much he appreciated the honor thus done him. That he felt a deal more than he said, every one knew, and many an eye grew moist as they saw

their leader, with his weight of eighty years, in front of his semblance when it was his to command, theirs to obey. They realized that in the years to come generations of men and women yet unborn will wish to know how the Colonel of the Twenty-fifth looked when he led his regiment. This portrait will tell them, and this is the portrait for the historian of city and county.

Alfred S. Roe, an honorary member of the Twenty-fifth, was called upon to respond for the Commonwealth, and, after allusions to the magnificent care which Massachusetts takes of her living soldiers and of the families of those gone on, he imagined the Bay State whispering in his ear the sentiments which were in evidence then, viz., the effort to let our loved ones know, while they are living, how much we appreciate them, and these are the words he fancied the State told him to repeat:

"If you have a word of cheer
That may light the pathway drear
Of a brother pilgrim here,
Let him know.
Show him you appreciate
What he does; and do not wait
Till the heavy hand of Fate
Lays him low.
If your heart contains a thought
That will brighter make his lot,
Then, in mercy, hide it not;
Tell him so.

Wait not till your friend is dead
Ere your compliments are said;
For the spirit that has fled,
If it know,
Does not need to speed it on
Our poor praise; where it has gone
Love's eternal, golden dawn
Is aglow.
But unto our brother here
That poor praise is very dear:
If you've any word of cheer
Tell him so."

Gen. Fred W. Wellington, son of one of the truest patriots the city ever knew, and a member of the Governor's staff, responded briefly in behalf of the militia, or the citizen soldiery. As an honorary member of the regiment, the men always like to hear him speak, remembering that his brother George, of the Twenty-fifth, had died in a Confederate prison.

His Honor Mayor E. F. Fletcher told of his regard for the veteran and of his pleasure in thus having a part in these memorable exercises. Other speakers were Capt. David M. Earle and Col. E. J. Russell of the Fifteenth; Maj. F. G. Stiles of the Forty-second; Gen. G. P. Hawkes and Artist J. M. Stone of the Twenty-first, the latter receiving three rousing cheers; Maj. E. T. Raymond of the Twenty-fifth and Thirty-sixth; Capt. Emerson Stone, Col. James Tucker of Boston, the last commander of the Twenty-fifth; Lieut. George A. Ball of Fitchburg; Capt. Frank H. Goodwin; Col. J. M. Drennan; Charles Kendall of Boston, the Adjutant of the Twenty-fifth; Lyman Leighton of Clinton; Commander George W. Barnes of Post 10, G. A. R.; Lieut. John Simonds of San Francisco.

Considering that nearly forty years have intervened since the regiment was mustered out, it was not a little creditable that nearly 200 men gathered for the reunion. Not alone were the veterans themselves there, but they brought with them their sons, who had been voted honorary members, and Capt. Emerson Stone of Spencer had the pleasure of presenting his little grandson, George Putnam Stone, from far-off Montana, as an honorary, and he was duly elected. No brighter or happier face appeared at the board than that of the lad from the Rocky Mountain State. As far as they could be ascertained, the names of those present were as follows, including those of Trustees of the Mechanics Association who had accepted their invitations:

Gen. Josiah Pickett, Gen. A. B. R. Sprague, E. M. Woodward, David M.

Earle, Gen. Fred W. Wellington, Charles H. Davis, J. M. Stone, W. H. Smith, C. W. Hobbs, George P. Hawkes, Alfred S. Roe, J. Stewart Brown, John R. Back, Maj. F. G. Stiles, C. H. Pinkham, Maj. E. T. Raymond, Col. James M. Drennan, George W. Hubbard, Osgood Plummer, Hon. Edward F. Fletcher, Fred T. Merriam, Charles W. Pinkham, Charles Adams, E. B. Dolliver, R James Tatman, A. W. Parmelee, Hannibal A. Johnson, C. W. Putnam, C. F. Leighton, Lyman Leighton of Clinton, George W. Wood, George E. Childs of Upton, P. C. H. Belcher of Randolph, Ira D. Bates of New Boston, Ct., E. M. Wheelock of Hopedale, Henry A. Pond, J. M. Fletcher of Milford, Nevenson Stone of Marlboro, William E. Fay of South Framingham, E. D. Webber of Brookfield, Oscar Tourtelotte of North Grosvenordale, Charles R. Hill of Holden, George S. Campbell of Auburn, Jeremiah Fisher of West Boylston, William W. Morris of Charlestown, John A. Taft of North Oxford, Sereno Howe of Oxford, Horace Merriam of Auburn, H. Arthur White of Philadelphia, Herbert O. White of Boston, C. N. Winship, E. W. Pratt of Barre, D. F. Gleason of Webster, Edwin Wilbur of West Brookfield, A. H. Seaver of Arlington, G. W. Henderson of Westminster, C. S. Aldrich of Washington, R. I., George W. Rice of Leicester, E. D. Lacount of Somerville, George V. Ball of Concord, John Simonds of San Francisco, Harvey Clark of Gardner, John L. Brown of Fitchburg, John A. Gilchrist of Sterling Junction, Charles E. Smith of Orange, Charles H. Stratton, W. H. Stratton of Malden, Edward Gleason of Shrewsbury, Thomas Finchan of Putnam, Ct., J. W. Gendill of Princeton, B. W. Mayo of Turners Falls, Henry A. Gerry of Athol, W. L. Wheeler of Fitchburg, O. J. Aldrich of Southbridge, E. Sawyer of Westboro, S C. Hastings of Providence, R. I., C. E. Boyles of Sterling, W. C. Wiswell of Spencer, Addison Childs of North Rutland, C. Class of Greenfield, Emerson Stone of Spencer, Charles F. Tenney of Boston, E. O. Holt of Gardner, Edward C. Cowles of Deerfield, William E. Murdock of Boston, Alfred J. Kirby of Grafton, James B. Horton of South Manchester, Ct., George P. Stone of Missoula, Mont., Charles Buffington, Leonard T. Gaskill, J. G. McCarter, Aaron Aldrich, Charles LeRoy Aldrich, Charles Allen, John Ryan, J. M. Stone, W. A. Brigham, George W. Hall, Albert B. Whipple, Joseph B. Knox, Charles F. Elkin, Walter S. Taft, H. J. Marcy, C. F. Wood, H. E. Newell, J. G. Leach, William O. Wilder, Martin McCue, Augustus E. Davis, Sydney L. Reed, William Cheney, James Carey, W. S. Hagar, C. A. Hyde, G. W. Stone, J. Nelson Flagg, Theodore N. Gates, C. E. Braman, James J. McLane, Ernest C. Reed, E. R. Lawrence, E. D. Goodell, H. C. Fisher, S. Hall, T. Hamilton, A. L. Bush, J. Henry Locke, Albert Peck, George H. Spaulding, F. Bartlett, J. W. Gould, Edward Parker, C. W. Wilson, Charles Schlenker, William Conner, A. L. Conner, Waldo Denny, Theodore Barber, Patrick Doherty and A. M. Parker; T. Spencer Jenks, James P. Crosby, G. W. Barnes, James Armstrong and Woodbury C. Smith, Trustees of Post 10, G. A. R.

In the hours of praise and gratulation the veterans did not forget the artist, and again they expressed themselves in unequivocal terms of approbation at the results of Comrade Stone's taste and deftness of touch. Naturally the word went round that all would like to know more of the man who had so joined himself to the interests of the Twenty-fifth, and it is in response to this reasonable curiosity that the WORCESTER MAGAZINE recites the leading features in his life.

JAMES MADISON STONE

was born in the town of Dana July 30, 1841, and there resided till his enlistment. His parents were James Rich and Azuba (Allen) Stone, the former of long-time Worcester County descent, the latter from Vermont, and a member of the same family which gave Ethan Allen to the nation. Of his father Mr. Stone has no recollection, for he was only two years old when this parent died, leaving seven children, and an eighth was born subsequent to his

death. The family circumstances were such that during his entire minority Mr. Stone knew the whole story of pinching poverty. At the age of nine years he was bound out, and till after the war had no school advantages except those of this country town. He was as effectually shut in as though nature had denied to him his complement of physical attributes. He had aspirations, but there seemed to be no way of realizing them. Then came the war, and the negro slave was not the only one whom the strife released from bondage. It was July 17, 1861, when he lacked thirteen days of twenty years, that he enlisted in Company K of the Twenty-first Regiment, then organizing, with a rendezvous in Worcester called Camp Lincoln.

J. MADISON STONE.

The new regiment left the city and State August 23, and took its way southward in pursuit of business. He was with it in Annapolis, was on hand when the Burnside expedition was fitted out, helped to make the record of the Twenty-first at Roanoke Island, Newberne and all through the Carolina campaign; was on the Norfolk trip, did his part in Pope's campaign, charged with his fellows across the famous bridge at Antietam, accompanied his regiment to Tennessee and endured with others the siege of Knoxville, and there re-enlisted; though without tents, he and his comrades were living on corn from the cob, a good type of the Federal soldier. Returning with the Ninth Corps, he helped Grant on his "all summer's line," till in front of Petersburg, July 29, he

came within one day of celebrating his birthday. Since then he was wounded, just before the Crater fight, and was soon sent to Emery Hospital, Washington. Shot through the fleshy part of the thigh, he came very near death's door, as that fiend of the hospitals, gangrene, set in, and but for the kindly care of a Worcester surgeon, Dr. Henry G. Bates, and his equally devoted wife, there had been no Stone to paint General Pickett's portrait. The condition of his wound was largely owing to a lack of proper attention, there being a wide difference in care in the wards. When his wound was at its worst, he was carried to the ward over which Dr. Bates presided, and in looking over his cot-card the doctor's wife discovered that her maiden name had been that of Mr. Stone's mother. Attracted by the fact, she became unremitting in her devotion, and between her and the surgeon the young Worcester County man pulled through and was discharged in September, 1865.

So then, when the war was over and the future must be considered, the late soldier, having saved his wages, proceeded to gain the education for which he had had no opportunity in his boyhood. Proceeding to Bernardston, he entered the excellent academy of that town, and for three years was an earnest student. Having a natural talent for penmanship, he early prepared himself for a teacher in this department, and during his student days was also an instructor. Later, for two years he directed writing schools through the northern parts of Worcester County. Next he betook himself to Germany, and for six years applied himself to the study and practice of art in Munich. He went away wholly unknowing the language of the people among whom he was to remain, but he grew to speak it like a native.

Returning to his own country in our Centennial year, he took up his abode in Boston, and there identified himself with art matters, teaching and painting as occasion offered. Among other portraits, he painted that of the famous divine, the Rev. Edward Payson of Portland, Me., for the gallery of Bowdoin College, of which Mr. Payson was at one time a Trustee. Also, he placed on canvas the well-known face of Mr. A. P. Marble, for many years the superintendent of Worcester's schools. In 1893 he became the director of drawing in the public schools of the city of Cambridge, and remained there for three years; thence coming to this city in a similar capacity, he has been the art mentor of youthful Worcester ever since. In a military way, he painted the portrait of his former commander, Gen. Charles B. Walcott, who had gone out as Captain of Company B in the Twenty-first; this work was executed for the Public Library of Cambridge. Next, taking a commission from the late Francis Plunkett, Esq., he depicted the features of the latter's brother, the well-known Tom Plunkett, or the armless Sergeant, which, as every one knows, now hangs in Mechanics Hall.

In painting the face and figure of General Pickett, there were several matters to be determined, as the expression, pose, and date of representation. On going through a large number of photographs which the General possessed, he decided upon one taken about the time the war ended, when manhood was at its best. Then, as to position, Mr. Stone says: "At Sergeant Plunkett's funeral I saw General Pickett for the first time; I was much impressed by his military bearing, and I made special note of his face and figure. It was his attitude, at a particular moment on that day, that I have endeavored to depict." It will be remembered by those

who were present that General Pickett, then Postmaster, had the direction of the exercises. Continuing, Mr. Stone remarks: "I have given to the face the refinement and culture of a New England gentleman, reasonably tanned with the service so recently performed." There is no doubt that the artist has succeeded in his efforts, and the portrait hanging in the alcove, so long the position of Governor Andrew, in Worcester's gallery, attests all that Mr. Stone had in mind when he settled himself to his task. It was vacation work that he did. So exacting are the duties of his place in our schools, there is no time for outside work, but with two months of respite he applied himself to the work. While General Pickett was much in evidence during the progress of the painting, he did not do all of the posing. One of the officers connected with our schools, having the proper form, substituted in the standing. The sword is the General's, but the coat was kindly loaned by one of the many gallant militia officers whom Worcester cherishes.

Now that the task is accomplished, and the face and figure of General Pickett hold a place among the elect in Mechanics Hall, thus honoring not only himself, but the regiment which he led, artist, soldiers and citizens alike rejoice that in one case, at least, it has been the privilege of a gallant leader, a faithful official and an exemplary private citizen to know what his associates think of him.

Advantages of Worcester as a Manufacturing Centre.

WORCESTER is recognized as the leading city in New England for the variety of its manufacturing products; the number of its manufacturing establishments; the skill and character of its artisans, and for the advantages for every variety of manufacture which can be successfully prosecuted in New England. The following are some of the reasons for its supremacy as a manufacturing centre:

1. It attracts a large number of skilled workmen from other countries on account of the foreign element employed by the American Steel & Wire Company, located in Worcester, who give work to nearly seven thousand operatives.

2. This class of mechanics represents a larger number of different nationalities than are probably represented in any other city in the United States, and, as these nationalities do not affiliate, concerted effort for promoting strikes, labor unions, and similar movements among the working class becomes impossible.

3. The skill of its mechanics is due largely to the prevalence of small establishments which employ from a score to two or three hundred workmen, as in such shops better opportunities are afforded for technical instruction and discipline than in mammoth establishments where the work is more specialized.

4. The loyalty of the workmen to the individual shop and business wherein they have been employed for a long term of years is a marked characteristic of the Worcester workmen, and probably a larger percentage of workmen can be found who have worked contin-

uously at the same shop for a long term of years than in any other city in New England.

5. The uniform growth of the manufacturing interests of Worcester during each decade for the last fifty years establishes the fact that its manufacturing prosperity is due to entirely reliable causes. It is to be noted that during the last thirty years Worcester has experienced no period of business depression, owing to the large variety of its manufactures.

6. It is the uniform testimony of the leading manufacturers of Worcester, especially in the iron-working trades, such as agricultural implements, textile machinery and machine tools, that Worcester affords better opportunity for the prosecution of their business than any other point in the United States, especially when the character of the labor is to be taken into account.

7. The large variety of the mechanical work carried on in Worcester enables any manufacturer to obtain supplies and outside work in other lines than his own to the best advantage, with the least delay and at the smallest cost.

8. The variety of the mechanical products furnishes a supply of skilled workmen capable of undertaking any kind of mechanical work.

9. The Worcester Polytechnic Institute furnishes a constant supply of trained men for positions of responsibility, such as draughtsmen, foremen, superintendents, etc.

10. The superior intelligence of the working class in Worcester is largely due to the superior class of instruction afforded by its evening schools, which give an extended course and afford an opportunity for young men to take advanced courses in those studies which are allied to the mechanical arts, and afford the foreign element an unusual opportunity for learning the English language.

11. The character of the mechanic in Worcester is due largely to the fact that Worcester is a city of homes, and the majority of the intelligent mechanics sooner or later aspire to own a home. This tendency has been fostered by the facilities afforded by the three large co-operative banks, which make easy loans, secured by real estate mortgages, and payable in monthly installments.

12. The topography of Worcester is peculiar, consisting of an undulating plateau, over which the temperature averages several degrees cooler than the surrounding country, the change being noticeable in a radius of even ten or fifteen miles, so that "ice-storms" in Worcester are usually rain-storms without the formation of ice fifteen miles away.

13. The soil is permeable, with usually a substrata of gravel which facilitates surface drainage and insures healthful conditions.

14. The extensive system of parks, eight in number, with the connecting system of boulevards, furnishes breathing spaces for all sections of the city and enhances its beauty for residences.

15. Worcester is noted for its fine drives through suburban hill towns, which afford delightful locations for summer residences, which are being rapidly utilized.

16. No city in New England outside of Boston has so extensive and efficient a system of electric car service, both within the city limits and throughout the adjoining towns.

17. Worcester is centrally located between a large number of available excursion points, with which it is connected by frequent train service, and to which frequent excursions are organized by the railroad companies during the excursion season.

18. Worcester is singularly free from the demoralizing influences incident to our summer resorts in or near other large cities, and Lake Quinsigamond, which affords a breathing space for multitudes of her citizens by its parks, steamboat service, summer residences and clubhouses, is frequently patronized on special days by twenty-five or thirty thousand people.

19. Worcester furnishes better facilities than any other city in New England for the employment of a high grade of female help, enabling the girls of the family to obtain cleanly and remunerative employment in the manufacturing establishments for the making

of envelopes, valentines, underwear, corsets, etc.

20. Worcester has nearly double the number of pupils in its high schools, of which there are three, for each one thousand inhabitants, that the city of Boston has, and more than any other city in New England. This is probably due to the fact that there is little employment in Worcester of child-labor, and that the head of the family is usually the bread-winner, enabling the wife to keep the home and the children to attend school.

21. Worcester has unrivalled railroad service, both for freight and passenger traffic. It has forty-two passenger trains a day between Worcester and Boston, the majority being express trains, making the trip in about one hour, and twenty-seven of these trains do not depend for their running time upon other railroad connections. It has ten trains a day between New York and Worcester, making the trip in about five hours and with first-class car service. It has twenty-two trains a day between Providence and Worcester, fourteen trains between Worcester, Norwich and New London, and four daily trains connecting with boats for New York. It has thirty-two daily trains over the northern roads, twenty over the Boston & Maine, and twelve over the Fitchburg division.

22. Worcester shippers gain all the substantial advantages in freight tariff afforded any city in New England. Its freight traffic has increased to such an extent that Worcester has a train of its own for western freight, which connects with other trains from Boston and New York at Harlem River, Newburgh, Albany, Mechanicsville and Rotterdam Junction. Worcester has water connections for export trade at Boston, East Boston, New York, Charlestown and Providence. Its freight tariffs on through western lines are Boston rates. In the matter of exports and imports Worcester is treated as a suburb of Boston, whence there are five lines of steamers to Great Britain, two to the continent, and one to the Baltic direct from Mystic Wharf. The successful development of large iron interests in inland towns in the United States shows that these industries are more dependent upon facilities for freight transportation and upon the character of the operatives than they are upon low freight tariffs; such, for instance, may be cited as the Berlin Bridge Company, Milwaukee Engine Builders and the Dayton, Ohio, Manufacturers, as well as a score of other localities which are also inland.

23. Between tide-water and the Niagara frontier Worcester enjoys lower rates than any competing point, and it has the great advantage that outside of local points in the immediate vicinity it has three competing lines of roads.

24. Worcester receives its coal from tide-water from Providence, Boston, East Boston, Charlestown, New London; at sixty-five cents from East Boston, and seventy-five from Providence and New London. Its all-rail coal rates are made at the mines and with all the advantages gained from competing lines. The fact that some of the large manufacturing establishments use between ten and twenty thousand tons of coal per month shows that the coal rate is not an obstacle.

25. Employers of labor can obtain the best labor in a city where the best laborers prefer to live and have the most advantages and inducements for establishing a home. One of the controlling inducements in Worcester is the facility with which laborers can obtain employment in any one of a large number of establishments, so that if he loses a job with one employer his chances are multiplied for obtaining another. This advantage is frequently spoken of by employees as their reason for choosing Worcester as their place of residence.

26. The management of its municipal affairs is conservative and economical.

27. The attractive architecture of its public and private buildings is noted by all visitors, and this feature is fast becoming a characteristic of the city.

28. Owing to its wide streets, open spaces, and especially to the efficiency of its Fire Department, which has no superior in the country, Worcester is remarkably exempt from fire losses.

29. Worcester has a bountiful supply of pure water, and its water rates have been reduced for the benefit of manufacturers.

30. Its high schools, Classical, English and South; its training schools, such as the Worcester Academy and Highland Military Academy, all nearly a century old; its various fitting schools; its Oread Institute, devoted to cooking and domestic sciences; its Polytechnical Institute; its Holy Cross College; and its Clark University, devoted to original research, to which is now added a collegiate department, together with its public school system, make Worcester one of the noted educational centers of the country.

31. Worcester is pre-eminently a city of churches, representing nearly every denomination, and it has some of the best and most expensive church edifices in New England.

Worcester in Literature.

Mrs. Annie Russell Marble.

THAT Worcester is a city appreciating literature is evident in the number of libraries within her borders, and the patronage they each and all receive. Aside from the public collections there are many private libraries far larger and more valuable than the public ones of the average town and even some cities. Though the bookstore as the fathers knew it has largely given place to the department of some erstwhile dry goods emporium, the people are still readers, and a set of Dickens from a bargain counter is just as readable as though bought in the orthodox manner of old.

Worcester people have also borne a prominent part in the making of books, and a proud list might be given of men and women who have thus contributed to the good of their fellow men. Among the names that might be mentioned no one is entitled to a better place than that of the lady who has recently sent forth to an exceedingly favorable reception the life of the poet naturalist, Henry D. Thoreau. Mrs. Marble, as Annie M. Russell, was born on Trumbull Street, the daughter of Isaiah Dunster and Nancy M. (Wentworth) Russell, through her parents tracing her lineage to the first President of Harvard and to the famous Governor Wentworth of New Hampshire. Her birthplace stood where the Kendrick stables are now, and in the march of progress it took a move to the southeast several years ago. Later, the family resided on Vernon Street, so that Miss Russell's grammar school days were passed in Ledge Street, where she had as headmaster that old-time favorite, C. C. Woodman. Thence she passed into the Classical high school in 1878, though she had finished the grammar grade one year before.

Pursuing the college preparatory course she was graduated with honor four years later, having a part in the final exercises, her theme being "Nina, wife of Rienza, the last of the Tribunes." Among her classmates might be named Mrs. Mary C. (Baker) Fisher, who accompanied her to college; Mrs. Florence M. (Belcher) Rugg; Colonel M. D. Cronin, U. S. A.; Thomas H. Gage, Jr., Esq.; Mrs. Edna (Harrington) Legg; Thomas B. Lawler of Ginn & Co., Boston; Charles F. Marble, to whom Miss Russell was subsequently married; Miss Helen DeF. Marshall; Mrs. Lizzie E. (Newland) Souther; the late Rev. Chas. G. Simmons; Mrs. May (Sleeper) Ruggles; Frank B. Smith, Esq., and Mrs. Annie E. (Wells) Munger.

In 1882 the school sent only two girls to Smith College, but in Misses Russell

and Baker the institution was well represented. After a stay of four well-spent years in Northampton, Miss Russell came back to her native city with foundations well laid for her later labors in a literary way, since throughout the larger part of her college life she had specially profited by the teachings of Miss Mary A. Jordan, with whom she had pursued rhetoric and English literature, had taken electives also, and to whose influence she ascribes the direction and success of her subsequent labors. The degree of M. A. was conferred by Smith in 1895 on Mrs. Marble's presentation of the theme, "Social Reform in Modern Literature."

After a respite of one year she went into her old school home, the Classical high, as a teacher, and there continued for the next three years, retiring to become, in 1890, the wife of Charles F. Marble, an Amherst graduate of 1886, like herself Worcester-born, and a fellow pupil of '82 in the high school. Making their home on Freeland Street, Mrs. Marble was soon drawn into teaching her favorite branch through her taking a class of recently graduated high school girls into regular reading and recitation in her own home. As the time advanced enlarged quarters became necessary, and the second year was had in the Y. M. C. A.; then for three years the work was at the Y. W. C. A., where in the final year the attendance ran up to one hundred and fifty ladies, taking up systematically English and American literature. During these years she was also doing a deal of lecturing outside of Worcester, as in Providence, Springfield, Lowell, Lynn, Fitchburg, and in the State of Connecticut, principally before woman's clubs and kindred organizations.

In her home study classes she had given critical attention to Carlyle's "Heroes and Hero Worship," and an annotated addition of this book was her first printed work, the same having been printed in 1897. Then followed, in 1899, her "Nature Pictures by American Poets," from the press of the Macmillan Co. Next, at the request of Houghton, Mifflin & Co., she edited an edition of "The Marble Faun" in the Riverside Series. Her next work was "Books That Nourish Us" in the What is Worth While Series, from Thos. Y. Crowell & Company, New York. Her latest work, the "Life of Thoreau," is reviewed in this number of the WORCESTER MAGAZINE. From the first, Mrs. Marble has received the highest praise from the critics, who recognize in her labors the result of years of the most careful preparation.

In addition to the volumes mentioned, Mrs. Marble has been a frequent contributor to The Critic, whose editor, Miss Gilder, has long been an admirer of our Worcester writer's work. Also she has repeatedly appeared in the Bookman and The Dial, an extremely critical literary publication of Chicago, and for which she has also reviewed current publications. Again we have seen her work occasionally in the New England Magazine, and the November number has, what some reviewers have considered its leading article, namely, "Francis Hopkinson—Man of Affairs and Letters."

Nor is this all, for in addition to the labors named Mrs. Marble has been for a long time one of the workers in the Woman's Club of this city, before which she has read papers, served upon its committees, and has helped to outline the work pursued in this busy hive of intellectual industry. Moreover, she takes an active part in the deliberations of the Col. Timothy Bigelow Chapter of the D. A. R., of which she is a member.

Our article would be far from complete if mention were not made of the home life of our Worcester writer. The early home on Freeland Street was in time exchanged for one purposely erected for the young people at No. 4 Marble Street, just a few steps from Main, yet upon the summit of the ridge of land near which the street lies, so that from the piazza and western windows may be seen the glorious vista which Worcester's sunset hills afford, and, until building operations shall cut off the view, there is a fine look towards the southern limit, whence come in summer days the breezes which make piazza life so charming. Here her studies are

pursued. Here, for a part of each year, she has the companionship of her aged mother, and here, too, her husband, immersed in the demands of active, driving business, takes supreme delight in the literary triumphs of his wife, realizing fully all the dreams of school and college days. If there be any alloy in all this happiness it is the fact that one voice of approval she can never hear again, viz., that of her Congressman brother, the late Hon. Charles A. Russell of Connecticut. Devoted as he was to the duties of public life he ever found time to read all that his sister wrote, and it will be a life-long pleasure to Mrs. Marble to know that her brother heard her latest book read and that he expressed himself in terms of unqualified approbation.

With her husband and the latter's family Mrs. Marble is a member of Piedmont Congregational Church, and there, too, she is a worker, having a class in the Sunday school. In conclusion, her native city regards with pride her successes, and awaits with interest the coming products of her researches and fancy, of which there are several in preparation.

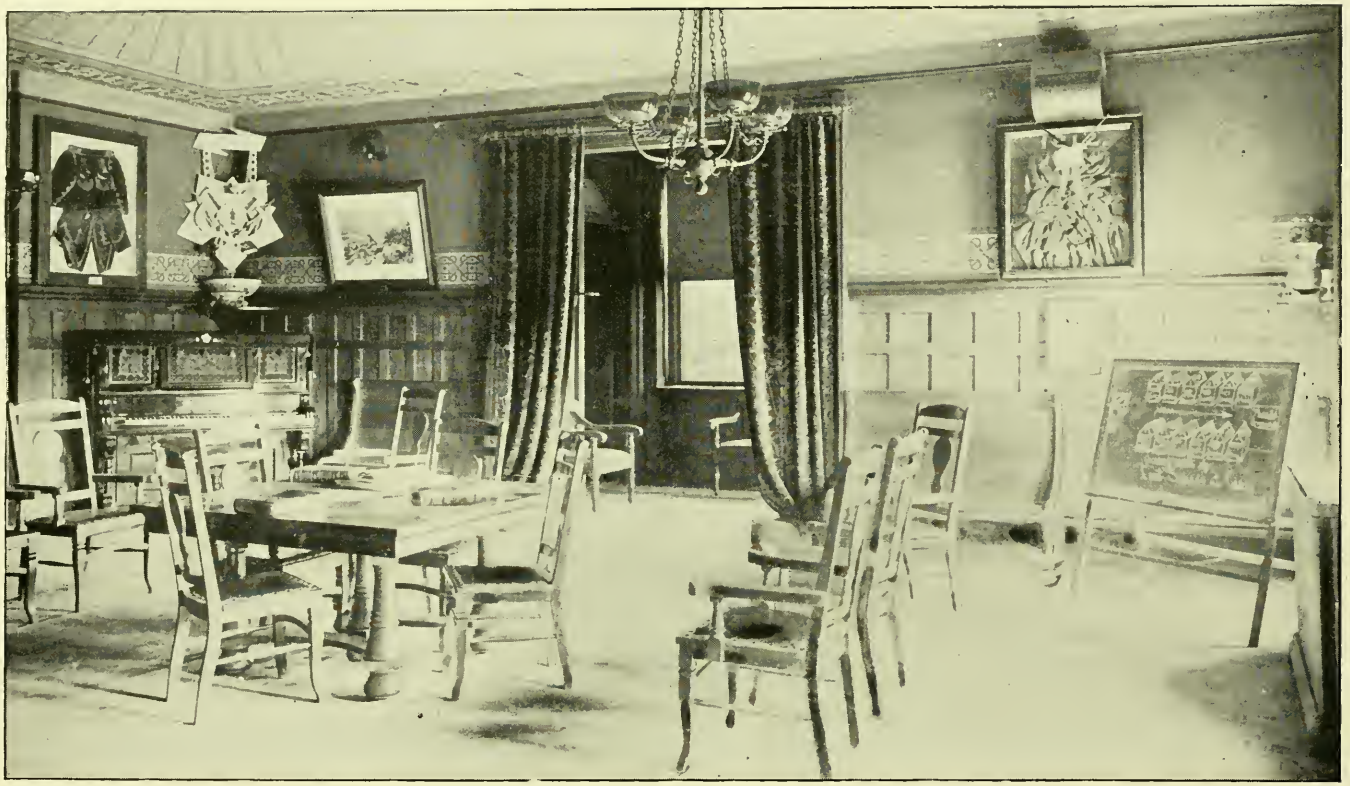
Worcester in the Spanish War.

LIGHT INFANTRY, COMPANY C, 2D REGIMENT, M. V. M.

[The story of "Worcester in the Spanish War" was begun in the November, 1901, number of the WORCESTER MAGAZINE, and was continued for the following six months, thus reciting the part borne by the City Guards, or Co. A, in that effort of the United States to free Cuba from Spanish rule. The record of the Light Infantry, to follow in succeeding issues of the MAGAZINE, will be compiled from diaries and data preserved by the several participants in the Cuban experience.]

ASIDE from the First and Second Parishes, or the Old South and the First Unitarian Societies, the Worcester Light Infantry is the oldest active organization in the city. There are two or three nominal bodies which occasionally awake sufficiently to partake of a dinner and then lapse into their accustomed comatose condition, but the Light Infantry has been up and doing for very nearly a century. It was away back in 1803 that Gov. Caleb Strong appended his name to a charter warranting the organizing and maintaining of a military company in the then remote and not over-populous township of Worcester. The application was written by the late Gov. Levi Lincoln while confined to his bed by a broken leg. As the first public parade of the Company was on the sixth day of the ensuing June, it does not require any great stretch of fancy to tell just when the Light Infantry of to-day purposes to celebrate the end of its first hundred years.

Organized for the purpose of helping defend and advance American interests, the Company has ever been upon the alert to volunteer whenever there has been an opportunity to act. Accordingly when, in 1807, there were mutterings of complaint against British arrogance and oppression, forerunners of the War of 1812, there was sent to the Governor an expression of the Light Infantry's readiness to help in any way possible to repel foreign aggression. This action must have been received by His Excellency James Sullivan with a deal of pleasure, for he had military promptings himself. A brother of the famous General John Sullivan of New Hampshire, only lameness resulting from a boyish accident prevented the subsequent Governor of Massachusetts acquiring equal fame with the man whose name is



LIGHT INFANTRY ROOM, ARMORY.

linked with some of the most thrilling incidents of the Revolution. As it was, though excluded from active participation in deeds of war, James Sullivan, in 1775, had executed an important military mission to Ticonderoga, and throughout that sanguinary period his was ever a potent voice in matters military. Hence the satisfaction he must have had over the thought that the Heart of the Commonwealth was beating loyally.

This premonition of war ripened into actuality only five years later, when the true war of independence began, and before it was over, our Light Infantry, under the command of Captain John W. Lincoln, subsequently sheriff of the county and one of the best equipped officers the city ever knew, marched to Boston to help repel attack. The Company went down, or started, September 11, and was on duty there till October 31, when it returned from, it is true, a bloodless campaign, but this was not the fault of the Light Infantry. It seems not a little interesting that the late Albert Curtis, who died in 1898, had a distinct recollection of the marching away of the brave and loyal men of that remote day.

Again during the Mexican War the Worcester boys of this crack Company were ready, and so expressed themselves, but their proffer of services was not accepted, because the quota of the State was already filled, and Governor George N. Briggs did not think well enough of the war to exceed the demands to any great extent. Those were days when, in 1846, "Hosea Biglow" was expressing himself in most unequivocal terms, and Governor "B" was known to be in perfect accord with the sentiments of James Russell Lowell. But this did not prevent members of the Company going into the service, and Captain George Lincoln fell at Buena Vista while serving on the staff of "Old Rough and Ready," or General Zachary Taylor, while endeavoring to rally and advance a western regiment which was retreating in disorder.

The War of the Rebellion is yet so near the affairs of to-day that it is hardly necessary to more than allude to the promptness with which the "boys" sprang to arms in 1861, and the city will ever cherish with increasing pride the fact that her Light Infantry was among the companies of the Sixth Regiment which, on April 19th, fought its way through the streets of Baltimore and was among the immortals who stacked arms in the nation's Senate chamber on the evening of that fatal day, the very first armed force to interpose itself between the country and its assailants. Many of those men are living to-day, and if not active members of the organization they love, their spirit is present and permeates every fibre of their successors.

The rank and file of the Light Infantry of 1898 were near of kin to the men who had done their duty in years agone, hence there need be no wonder that the active members were alert to all the indications of approaching storm. It was not so much a feeling of apprehension as it was one of extreme anxiety lest the trouble should blow over and there should be no chance to show their metal. As the news from the Pearl of the Antilles grew more and more intense, and it became daily more clear that the nation would have to undertake not alone the avenging of the Maine, but the complete expulsion of Spain from this western world, the citizen soldier longed for the opportunity to do his part.

As early as April 11 Colonel Clark of the Second Regiment sent out a precautionary order with reference to extra preparation in the matter of culinary outfit. As a veteran of the Civil War the Colonel remembered General Sherman's remark that an army moves on its belly, and it was a wise precaution of his that the men whom he was to lead should not grow hungry. The average stomach can endure a great deal of variety and many privations, but it must have something, else the stoutest heart will fail. April 22 came another order from the same source, directing every care that all data and memoranda should be carefully preserved, another direction inspired by recollection of the war, 1861-'65. Three days later, or April 25th, came the order to hold the Com-

pany ready to respond within twenty-four hours' notice. Matters were growing warm, and each member was arranging his affairs so that he could go.

The next demonstration came in the shape of a telephonic communication from regimental headquarters in Springfield to Captain Rider, of which the following is a verbatim transcript:

"April 30, 1898.

"Order received by telephone, 12.20 p.m.

"I am to make arrangements with the R. R. Co. to have my Company in Framingham Tuesday, May 3, at 12 m. Transportation order will be sent to me by the Quartermaster General.

"Arrange to feed my command for one week, same as at camp. Take all state property in my possession or freight it down there. Leave at home all men who are not going to volunteer. Take enough other men to make a total enlistment of 79 men. We are going down there as a volunteer organization, but not as the Second Regiment. Copied by Geo. H. Hill, sergeant."

The same day came a telegram from Springfield, worded thus:

"New orders from Adjutant General. (U. S.) Total for company, 77, including officers. Take only this number Tuesday.

"Paul R. Hawkins,
"1st Lieut. and Adjutant."

As this telegram came at 10.17 p.m. it superseded the noon telephone communication. Then, to still further modify the matter of numbers, a letter came later stating that the maximum was seventy-five men in all.

So much for the orders under which notifications were sent to the members of the Company. They found the men or boys, since many of the members had not passed their majority, in shops, behind counters, and some even in school. Says one of the latter class, "I was to take the part of 'Jenkins' in a play to be given the evening of April 29th in the Classical high school, and on the afternoon of that day was taking my lessons in a dress rehearsal, when my father appeared to tell me that I was wanted at the Armory in the evening at eight o'clock. What could I do? At last one of the teachers volunteered to see the Captain and to try to beg off for me till after the play. His plea was effectual, and I took my part till near the end of the second act, when a friend stepped into my place and I went down to the Armory, where I found everything at fever heat. Those who were fierce for the war were making speeches, while others were eloquently silent. That first evening thirty-two of the members expressed themselves as ready to go."

Thence onward there was an almost continuous meeting in the company rooms right up to the day of departure, which was the 3rd of May, Tuesday. The companies were to report in Framingham before noon and they were to proceed by special train, which was to start from Springfield. Unhappily the day itself proved to be anything but the beautiful one we might expect early in the vernal month, but the people were not to be cheated of their show, whatever the weather. They were out by the thousand, of both sexes and of all ages. Schools were closed, that younger lads and lassies might see their brothers march away, and right royally were they rewarded. All the semi-military bodies in the city were in line, the right of the same being taken by the Grand Army of the Republic, many of whom had sons among the departing volunteers. The Mayor of the city gave a parting word as the companies were drawn up in a hollow square in the drill-shed, and a fervent prayer was offered by the Rev. Almon Gunnison of the First Universalist Church. Then the march began, extending down Main Street as far as the Post Office and around the same back by the City Hall, where the Mayor and the City Government reviewed the embryonic soldiers. Thence along Front Street the line moved to the Union Station, everywhere through thousands of people, to whom the scene was of vastly more interest than it was to the men themselves. Indeed, one participant modestly remarks in his diary, "Somehow I didn't see as we were doing anything to make such a stir, but the older ones knew much better than we did what we were to soon

pass through." The boy was right; many in that vast array of humanity had seen men go to war before, and in so many cases had awaited in vain the home-coming of those who had so bravely marched away; the gray and wrinkled veterans of the G. A. R. knew just what it all meant, for they had been through it all. None the less, all made the air ring with their applause, all being determined that their boys should have the very best send-off that Worcester could give.

Soon the vast station received the "boys in blue," where the train from Springfield absorbed them, also Companies A and H and the two companies which had come down from the north, and then amid shouts and cheers, accompanied in many cases by tears, the cars moved slowly out with their precious burdens of men devoted to what they deemed duty and the right. Those who left the city as members of Company C on that rainy Tuesday were the following:

LIGHT INFANTRY OFFICERS, 1896.

W. F. GILMAN, 1ST LIEUTENANT. P. L. RIDER, CAPTAIN

F. L. ALLEN, 2D LIEUTENANT.

Captain P. L. Rider,
First Lieutenant F. L. Allen,
Second Lieutenant F. M. Clark, Jr.,
First Sergeant A. C. King,
Sergeant H. W. Warren,
Sergeant W. E. C. Fairbanks,
Sergeant Geo. H. Hill,
Corporal A. S. Longley,
Corporal Geo. W. Stebbins,
Musician F. J. Zaeder.

Privates.

John H. Allen,
E. M. Barnard,
Wm. E. Barton,
C. E. Butler,
J. J. Coburn,
C. H. Colburn,
W. G. Dennis,
R. H. Dowse,
C. T. Eldridge,
G. S. Farrow,
C. T. Fletcher,
H. J. Greene,
H. H. Ham,
H. L. Hastings,
J. W. Holbrook,
Roland Johnson,
Geo. T. Jones,
R. W. Kincaid,
C. H. Knibbs,
P. W. Lincoln,
S. I. Mayo,
W. A. Merrifield,
O. J. Newton,
R. C. Randall,
A. F. Rebboli,
G. E. Rix,
J. C. Stevenson,
Robert Taft,
C. A. Vaughan, Jr.,
F. W. Washburn,
H. B. Wentworth,
J. L. Wilmot,
A. T. Wintersgill,
Emil Zaeder.

Recruits.

H. H. Adams,
G. H. Bejume,
J. F. Bradley,
E. A. Briggs,
C. A. Browne,
I. A. Brigham,
W. H. Butler,
F. E. Crosman,
F. P. Dean,
W. W. Eddy,
A. C. Gage,
W. L. Gage,
O, J. W. Gleason,
J. C. King,
E. J. Martin,
F. B. Maynard,
E. G. Oliver,
F. S. Owen,
A. J. Pembleton,
F. W. Pettet,
R. H. Pitts,
J. E. Pope,
B. A. Prince,
W. D. Rheutan,
W. D. Roberts,
E. A. Stearns,
A. D. Stewart,
F. B. Taft,
F. W. Ward.
E. D. Wooldridge,

(To be continued.)

Books New and Old.

The November Magazines.

That New Yorker who does not find a deal of interest in the Four-Track News must be exceedingly exacting, for the chapters of good things extend from early railroading, its New York aspect, to the magnificent water power of the city of Fulton and beyond. With every article lavishly illustrated, there are incidental touches of Ohio, Ticonderoga, Peter Cooper, Mexico, the Cary Sisters, Niagara in Winter, the Trappist Monks at Gethsemane, Tacoma, the Battle of Oriskany, and many other items, each of interest and instruction.

The Royal Blue starts off with the game law of the country, with superior pictures of birds and beasts, a story of the game fields of Maryland and West Virginia, the passing of diamond-back terrapin. In fine it is a game number.

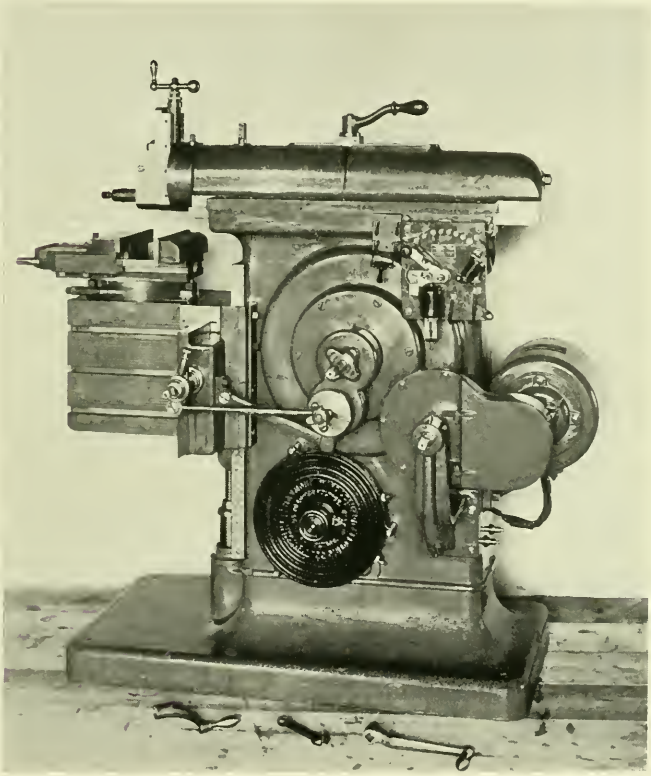
The Southern Workman is a magazine with an object which is never lost sight of, viz.: the improvement of the colored race, and no matter what is printed the ever present uplift is in mind. In addition to editorial and personal items, President Frissell contributes "European Impressions;" "Negro Labor in Factories" is discussed; "New Features in the Schools of Kansas City" gives an inspiring outline of manual labor in a colored school there, with illustrations; the "Whittier School Garden" tells of the Practice School of the Hampton Institute, while a "Vignette of Slavery" is a choice bit of old-time Virginia life among the colored people. More such should be collected before it is too late. "An Indian Missionary" and "The Handicap of a Negro Mechanic" are practical themes well handled. The magazine is doing an excellent work.

The frontispiece of the National Magazine will particularly appeal to Worcester folks, since it represents President Roosevelt in his visit to Worcester in August last. Senator Hoar is seen sitting by the President. Harry Smith holds the reins and Detective Craig, to die a day or two later in Pittsfield, rides with Smith upon the front seat. There are illustrations by the score, and while everything is excellent, possibly the most valuable article is that concerning President Diaz of Mexico.

Out West, once the Land of Sunshine, is fully up to the standard early set by its editor, Charles F. Lummis, who is still discoursing grandly on the "Right Hand of the Continent," and in his editorials continues to hit right and left any and all shams, evils, and things that he does not like. He occupies no middle ground. His prejudices are deeply grounded, and for good or bad his language is wonderfully expressive. The Sierra Club in King's River Canon introduces us to a group of California notables, giving their faces in a line-up, as well as their diversions in their outing. The final chapter on the agricultural advantages of the Pacific slope makes the reader's heart wish for a sight of this land which more than flows with milk and honey.

INDUSTRIAL NOTES.

New Stockbridge Shaper.



The Stockbridge Machine Co. have brought out a new motor-driven shaper which has several novel features that commend themselves to the practical mechanic. It is fitted with an entirely new combination crank-motion that gives an even cutting speed throughout the entire length of the stroke, and a quick return of 4 to 1, and a very powerful cutting stroke, in which the power is maintained throughout the entire length of the stroke. It is driven with a direct connected motor of 1 1-2 horse power with a variation of speed of 200 per cent., and by changing one gear they get another 200 per cent., making a variation of 400 per cent. of speed from the slowest to the fastest, or any number of revolutions of the driving shaft from 75 to 450. Other new features of the machine are a simple automatic down feed for the head and a telescope screw for raising and lowering the table, making it very convenient to set the machine on a concrete floor or a masonry foundation where a hole for the elevating screw could not readily be cut. There is an opening through under the ram through which shafts up to 2 1-4 inches in diameter can be passed for splining. The ram has a stroke of 16 inches, the head a vertical feed of 6 inches, and the cross-feed to the table is 22 inches; the vertical movement of the knee is 14 inches. The feed-screws are fitted with graduated collars, the cross-feed gears are covered, and the rod connecting them with the ratchet pawl automatically adjusts itself to any position of the knee. The vise is of the swivel-base pattern, and is clamped in any position by one screw. A government order has just been received for twenty of these machines.

WORCESTER INDUSTRIES

VIII.

The Making of Iron Castings.

PLANT OF STANDARD FOUNDRY COMPANY.

SOMEONE with a craze for lost landmarks should try running to earth the first foundry. It was probably operated before the flood, although the supply of antiques bearing the trade mark of Tubal-cain, the first recorded worker in iron, is extremely frugal, and the literature of the period is inconclusive. In any case, it is quite certain that the iron business experienced the same total eclipse that paralyzed every other infant industry of ancient times. Furnace fires must have been soon relighted, however, as Egyptian statues of bronze have been unearthed that are certainly four thousand years old. The giant King of Bashan slept in an iron bed, the gates of Babylon were cast in bronze, and medals of the period were made in the same manner.

The making of iron castings was one of Worcester's early industries. Mr. William A. Wheeler started the first foundry in Worcester in 1825 at the corner of Thomas and Union Streets. Since that date the city has developed a great number of mechanical enterprises, which are all more or less dependent upon the products of the foundry.

On every hand evidences multiply of the increasing use of iron castings—in the structure of business blocks, and in public conveyances of every kind. Even

in our homes we find stoves and many other useful articles made of cast iron. But these form a very small part of the total product of the furnaces, as nearly every manufactured article is now made wholly or in part by machinery, and practically all machinery is built on a sub-structure of cast iron. For this reason many of the larger manufacturers, who are dependent upon a regular supply of large quantities of castings, give their first attention to a well-equipped private foundry. Into these foundries it is sometimes difficult to penetrate, as their owners do not care to advertise the improvements they have introduced in the effort to minimize this first outlay in machine construction.

With few exceptions, Worcester manufacturers prefer to patronize a convenient and reliable job foundry. One of the most modern and best equipped of these independent concerns is the Standard Foundry Company, on Gardner and Tainter Streets. Here, in the great moulding-room, are facilities for turning out daily an immense quantity of castings of an endless variety. The main moulding-room occupies a central position in a long brick building fronting on Tainter Street and abutting the tracks of the Boston & Albany Railroad in the rear. In the front section are the main office and storerooms for patterns, while below these is the finishing department, where the castings are pickled and cleaned. At the other end are swinging-cranes, cupolas, engine-room, carpenter shop, core-rooms and baking-ovens, and the sheds for coal, sand and stock. A recent addition at this end accommodates a large force of machine and bench moulders.

MAIN MOULDING-ROOM.

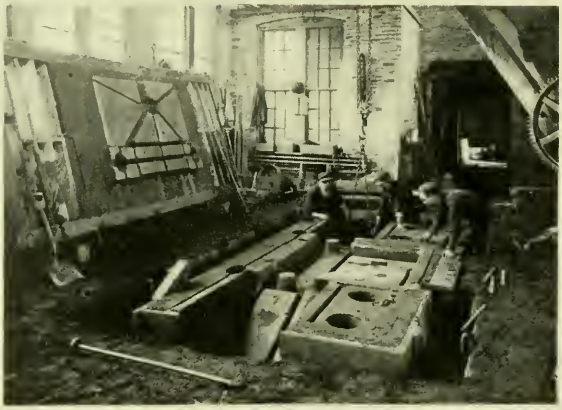
It would be difficult to improve these facilities for handling any order from the smallest pinion to the largest engine bed. The general process of moulding is simple enough, but the wide variety of work called for makes it necessary for a successful foundryman to gain by long experience a perfect command of every last detail of his business.

We have aimed here to point out,

Core Making

Lowering a Heavy Cope

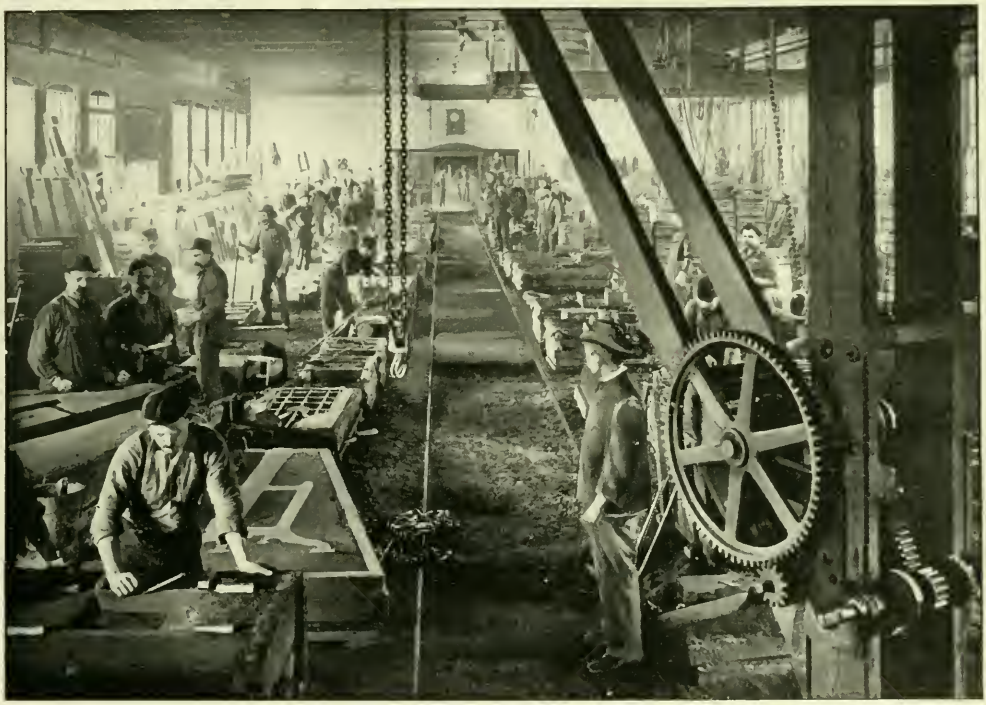
Bench Moulding



Preparing a Large Pit Mould

mainly through the illustrations, something of the route taken by a ladleful of melted iron from the time it leaves the cupola to the time it leaves the cleaning-room. A better way to see the process is to visit a foundry. In the nature of the business the average foundry owns up to maintaining a pretty hard looking interior, but by exercising a due amount of care and diligence this feature may, to a great degree, be almost entirely overcome and an air of neatness prevail. Coming in out of the broad sunlight, while pouring off is taking place, one's first impression is of dirt and general wreckage, dimly seen through an atmosphere of black dust, blue smoke and white steam from the cooling flasks. As a preparation for breathing, this atmosphere looks a little miscellaneous and deadly, but the men screen it through lighted clays and seem to prefer it to fresh air.

The time to see the foundry at its best is in the twilight of a winter afternoon when an unusually large mould is to be poured. The dull gloom of the place, the sharp orders of the foreman, the swinging of the great cranes, a sense of impending danger, the sudden lighting up of the interior by the rush of white-hot iron from the cupola, all contribute to a scene that is finely dramatic and spectacular. There is an occasional harmless explosion of gas, or a hair-raising escape from a shower of hissing sparks to keep one's nerves on edge. A man who has never seen a ten-ton casting poured has a new thrill in store for him.



LOOKING FROM THE CUPOLAS.

In order to understand the process from the start it is necessary to go back a step to the bench of the pattern-maker, where has been fashioned from wood a full-sized model of the casting that is required. The skill of the moulder is sometimes tested to the utmost in producing a mould, as patterns are often of necessity so constructed as to be withdrawn from the sand only with the greatest difficulty. A good moulder is a high-priced mechanic.

The simpler patterns are first laid on a flat board and enclosed with an open frame. This frame is the lower half of the flask, and is called the nowel. Moulding sand is then sifted over the pattern, and is rammed until the lower half of the flask is filled. When this is turned over, the pattern is seen on the surface embedded in the sand. It is then necessary to place a similar frame called a cope over the first and ram this full of sand. The cope is then removed so that the moulder can withdraw the pattern and dress up any imperfections in the mould. A clean passage through the cope is made for the introduction of the melted iron; it is then replaced in position, and the two parts securely clamped together, when the flask is ready to be poured.

Frequently the moulds for smaller castings are made in what is termed a snap-flask, the flask being removed after the mould is complete. In this case weights are used to properly secure the mould while pouring. A bench moulder, as seen in the foreground of the illustration entitled "Bench Moulding," has removed the cope and is about to withdraw the pattern. When the casting required is of very irregular and complicated design, a two-part flask will not accommodate the pattern, and it is necessary to introduce one or more so-called "cheeks" between the nowel and the cope. In this case the pattern itself is made up of several parts, each part or section being withdrawn from the sand as the mould progresses.

While the moulds are being prepared the cupola is filled, first with a bed of coal and coke, then one of selected iron, and so on alternately until sufficient metal for the day's run has been placed in the cupola. In the early afternoon the cupola is fired, and a fierce heat, augmented by a powerful air blast, soon reduces the iron to a white-hot liquid that flows almost as freely as water. A small outlet in the side, previously stopped up with clay, is now opened and a stream of iron rushes down a spout and into a ladle mounted on a truck, whence it is delivered to the waiting moulders.

When castings of several tons' weight are to be poured, a powerful crane is employed to raise the great ladles full of iron. These large castings are made in a pit dug in the ground, and the moulds for them often consume many days in preparation. In such a case great care must be taken at every point, as a faulty casting would mean a heavy loss.

An important part of the making of castings is the introduction of cores when required. These cores are made by filling a core box of iron or wood with a mixture of sand and some adhesive, the box being shaped according to the space to be left hollow in the casting. The cores are properly baked in an oven especially designed for the purpose, and then inserted in the mould, and the iron flows around them.

Small castings that are to be duplicated many times over are in modern practice made by machine moulding. Two men stand side by side and operate machines which make the upper and lower halves of the mould from iron forms. The Standard Foundry Company has a number of these machines in daily operation.

After pouring, the castings stand in the moulds until cool, when they are removed to the cleaning and pickling room and cleaned. Some are pickled in vitriol and then washed, others are filed and chipped, or ground on emery wheels. This is a brief outline of a process that involves an endless number of details which are of no special interest to the reader.

It will be seen that the proper management of a foundry requires special knowledge and long training in every branch. The success of the Standard Foundry Company is due to a great extent to the capable management of its active officers, consisting of Frank T. Williams, president; Charles F. Hutchins, treasurer; and Thomas T. Booth, assistant treasurer and secretary, and to the confidence of its customers in their judgment. Mr. Williams acts as general manager, and has from boyhood made a study of every phase of foundry work from the inside. He can dispel in a very brief time any impression that the management of a foundry is an easy

Machine Moulding

Core Room and Ovens

Cleaning and Pickling

Pattern Room

problem, simply because its product is a rough casting, on which the finer work of the machine tool is still to be done. The proper proportions of iron, coal and coke, and the way they should be placed in the cupola; the grade of iron for the purpose required, the right proportion of silicon,—these are a few of the fundamental problems that make or break the reputation of a foundry for reliable work.

A lifetime of experience in working various grades of native and foreign metals has led Mr. Williams to make careful tests of every consignment of iron that enters the foundry. Its tensile strength, durability, fineness of grain, and general adaptability to the work at hand are therefore not a question of theory or snap judgment, but the results of an actual recorded test. This is the nut in the shell that enables the Standard Foundry Company to turn out such a large per cent. of its daily run the year round. The value of this kind of experience is sometimes overlooked by a certain class of consumers, who imagine that the problem of making a casting begins and ends with forming a mould in the sand and filling it with melted iron.

Street Paving in Worcester.

SCHOOL STREET, AFTER PAVING.

Under the above heading the October number of the WORCESTER MAGAZINE contained an illustrated article setting forth the advantages of the bituminous macadam waterproof pavement. The pictures showed two locations in which the work was in progress. The School-street site showed that part which passes by the Whitney factory and extends across the B. & M. railroad. Comparisons with the illustrations in the October MAGAZINE will show the great improvement now enjoyed. As the work itself was then progressing, it was impossible to show the *after* picture which is presented here.

Possibly the contrast is even more apparent in the Main-street instance. The place chosen is that which includes Piedmont Church, and the before and after cuts will convince the most obdurate that a good work has been done. It has taken Worcester some time to awake to the true necessities of the situation, but better late than never. With these cases of waterproof macadam and the granite block pavement, it would seem that the Heart of the Commonwealth, if she continues the undertaking, will some day have her thoroughfares ready for all sorts of teaming, as well adapted to the light vehicle as to the heavy dray, worthy the commendation of the automobilist and the wheelman. There may be differences of opinion as to the best kind of pavement, but all are agreed that there must be an advance on the system hitherto prevailing.

MAIN STREET, AFTER PAVING.

Books New and Old.

Thoreau: His Home, Friends and Books, by Annie Russell Marble, from the press of Thomas Y. Crowell & Company, New York.— Nothing in the way of American book-making for the year 1902 exceeds in value this latest result of Mrs. Marble's taste and zeal. There were already in existence biographies of Thoreau, and at first thought we may have wondered why another should be written, but even a casual turning of the leaves of this volume convinces us that the discoveries made, the new matter recorded, give ample reason for the project, and every reader must lay aside the book not only with a feeling of gratitude to the writer, but with a sense of acquaintance with the poet-naturalist never held before. There is no effort made to enter into the minutiae of biography, but with a rare sense of the essentials, Mrs. Marble writes so entertainingly that each page irresistibly draws the reader to the next. Worcester has a wide interest in Thoreau, since here were some of his deepest admirers when living, and many ardent lovers long mourned his untimely taking off. His "Trip to Wachusett" was written in the early days of his manhood, but to-day a reading of the sketch is a desirable preface to an excursion to the summit of the county's highest prominence. Owing to this city's being the residence of H. G. O. Blake, Theodore Brown, and other sincere admirers of Thoreau, he often came here to lecture, and there are aged people in the city to-day who can tell of their listening to addresses which they did not then altogether understand. Were the private libraries of Worcester to be inspected, there is little doubt that they would reveal as many copies of Thoreau's writings as any equal number of collections elsewhere. Mrs. Marble has with the best of taste grouped her thought around nine central themes, viz.: Thoreau's Concord and Environs; his Family; Years of Preparation; Walden Experiment; Years of Expression; his Philosophy and Art of Life; his Friends; as Naturalist; and, finally, his Service and Rank. Many have read Thoreau, both his own writings and of him, through Channing, Sanborn, Page, and others, but no one, no matter how well read, need fear to read this latest story with apprehension lest old dishes be simply served up afresh. Long and diligent search in the fields most frequented by Thoreau himself has resulted in the finding of large quantities of new matter, which come to us in most appetizing form, and if by chance an old friend appears, he comes in with an expression entirely unexpected and new. Into that corner of our libraries where we long since placed Walden and Excursions, ready for immediate service, we should put this latest and, in many respects, best picture of our favorite's life and eventual triumphs. The manner of telling Thoreau's career is not only appreciative, but it has a true literary flavor afforded only by those who love and, at the same time, have native and acquired ability to describe aright that which influences them. In some of the leading reviews of the volume it has been placed among the most notable contributions to the literary products of the season. Exteriorly the volume is a thing of beauty, and throughout no pains has been spared to make the work in keeping with the subject and its treatment. A fine portrait of the poet-naturalist himself leads off; this is followed by numerous views of places almost sacred through their associations, and the faces of Emerson and Blake also appear. The proximity of Christmas will suggest the book as a very appropriate gift to such as revere Thoreau, his life and his aims.

"Father John," or the Life of the Very Rev. John J. Power, D.D., V.G., Pastor of St. Paul's Church, by John J. McGratty, with an introduction by President G. Stanley Hall of Clark University. Published in Worcester by the author. — In a modest 12mo of 172 pages, the author has compressed the most important items in the life of this admirable man, so long a devoted priest in Worcester. Two facts have conspired to produce a volume of unusual interest and value. First, the author is a newspaper man of long experience, and secondly, he had a most excellent subject for his theme. The Worcester Magazine, very soon after the death of Father Power, printed a fine abstract of his life from the pen of Mr. George McAleer, and it now welcomes this addition to the story with a deal of pleasure. Into the thirteen chapters, Mr. McGratty has crowded a large amount of matter which the people who loved the clergyman best will be glad to remember. The introduction by President Hall is in the superior manner which that distinguished writer always effects, and in

the last chapter appears an eloquent tribute from the pen of our own Senator, George F. Hoar, long associated with the deceased. In a word, the author has given us a book which adds much to our stock of local lore, and has placed in a permanent niche the form of one whom the public, irrespective of religious beliefs, thought most highly.

MANHOOD-MAKING, by the Rev. Alexander Lewis, Ph. D., from the Pilgrim Press, is a strikingly handsome volume, particularly well fitted for a Christmas present, and is sure to be a favorite. Received too late for extended notice in this number, it will be considered again in the January Magazine.

The same disposition must be made of the delightful little book which comes from the press of J. C. L. Clark of Lancaster, descriptive of the life in Harvard of the Alcott family. A treasure to all who revere the Alcott parents and their remarkable daughters—and who does not?—will be reviewed in our next.

What People Might Think.

"Dark and dull night, flie hence away,
And give the honor to this day
That sees December turn'd to May."
Herrick.

IT is a wise provision of Providence that as the attractions of out-of-doors grow less in our New England, immediately are found diversions within which make us forget the rigors of our stern and rockbound coast against which the breaking waves dashed high when our forefathers first sought a harbor here.

LITTLE did those worthies think that in following years customs and practices reprobated by them would become an almost inseparable part of their descendants' ways of living. Stern Governor Bradford had no liking for the Christmas-keeping excuses of some of the recent comers to the colony or plantation, and all of the Pilgrims were anxious to throw aside old-world habits for something new. Hence, perhaps, the exaltation of Thanksgiving.

HE would be a recreant son who should attempt in any way to lessen the regard for the truly New England holiday, and who does not rejoice that its observance has pretty nearly included the entire nation; but at the same time, the most loyal of New England's children, who has so recently done his part at the annual family gathering, is finding an equally responsive chord in his heart over the Christmas festivities which follow hard after those of Thanksgiving. Centuries of old-world ways of doing revive in him, and whether orthodox or heterodox, he cheerfully joins the crowd that would make a holy as well as a holiday.

WORCESTER'S merchants are alive to the demands of the hour, and, with the street railways, they undertake to give to the city an activity more pronounced than ever. Our Board of Trade Notes outline what they are expecting to do, and if their places are not busy marts of trade then will country dwellers fail to recognize a good thing when seen. At no time in the whole twelve months do our stores look so inviting as when they don their December attire and make everything shine. The street railways which centre here make it possible for thousands to come and go where five years ago only a few score could avail themselves of such opportunities.

READERS of the MAGAZINE will observe that many of our best business men, irrespective of political party, are growing restive under tariff restrictions, and are demanding a per-

manent commission of revision, not an ultra-partisan body, but one representing both prominent parties, and to insure the highest value it should represent all sections of the nation. While the West is crying for certain modifications, it holds up its hands in utter horror over equally strong demands from the East. If no agreement can be reached, then should the changes be made to produce the greatest good for the greatest number. Upon such a platform as this thoughtful men everywhere ought to be able to unite. In all discussions and deliberations the fable of the Hands and the Body must not be lost sight of. The extent of our territory, and the variety of our occupations, demand the utmost wisdom on the part of those who would legislate for the good of the whole body politic.

IF the same has not already been observed by those who read the pages of this monthly, their attention is called to the fact that the WORCESTER MAGAZINE is maintained for the advancement, in all legitimate ways, of the city whose name it bears. If Worcester in this or that seems to be often in evidence, it will be remembered that were there no such flourishing municipality as Worcester, there would be no Worcester Board of Trade, nor any magazine to attempt to set forth the merits and attractions of this place, located very near the heart of the Commonwealth, and so specially susceptible to every move which redounds to the good of Massachusetts, and, incidentally, to that of the city. Our city is in the centre of an extremely fertile agricultural section, as well as the resort of the most expert mechanics in the world. Her professional men are as good as the best, and her schools yield in character to those of no other place, hence the unceasing cry of all interested, "Let us by all means in our power advance the interests of our own home city, Worcester."

THIS number of the WORCESTER MAGAZINE will have been read before the results of the municipal elections are known. That a deal of interest in the same is felt becomes apparent when the increased registration is noted. Our city has some people who openly proclaim their indifference to local issues, and say they will not take the trouble to go to the polls. Such people have no just cause for complaint if matters go wrong or not to their liking. While party responsibility may be productive of certain desirable conditions, there are those who claim that, in home matters, there should be no mention of party names, and they ask whether elections to-day are resulting in greater municipal prosperity than when divisions were along non-partisan lines. However, whatever the alignment, it augurs commendable interest when city registration exceeds that for state and national issues. Naturalization clubs have done their part towards this result, induced thereto, very likely, by the mayoralty question, since not for many years have more determined efforts been put forth than the two great parties are now making to place their respective candidates in the City Hall. A third party, thoroughly at odds with both of the greater ones, enters the field with a full list of candidates, just so much involving the outcome in doubt. For the period of her municipal life, Worcester has exultingly pointed to her record as being well nigh immaculate. The active, zealous, determined concurrence of her best people can keep it thus.

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Board of Trade Notes.

The Committee on Legislation, at the Directors' meeting Thursday, Nov. 13, presented the following report, which was accepted and the recommendations made therein were adopted:

TO THE PRESIDENT AND BOARD OF DIRECTORS,

WORCESTER BOARD OF TRADE.

Gentlemen:

Your committee on legislative matters, to whom was referred the communication relative to the appointment of a permanent national tariff commission, recommend the adoption of the following petition by the Worcester Board of Trade, to be sent to the President of the United States, the Secretary of the United States Senate, the Speaker of the House of Representatives, the two United States Senators from Massachusetts and the Congressman from this district:

PETITION.

The Worcester (Mass.) Board of Trade, through its officers and Board of Directors, believe that any wholesale revision of our tariff schedules is inadvisable, as such action is sure to seriously disturb business conditions and cripple many business enterprises. But realizing as we do that the time *has arrived* when some changes should be made in these schedules, and to meet the present conditiou of business affairs, to provide for such changes, we respectfully and most earnestly petition you to enact, without unnecessary delay, such legislation as may be necessary for a bi-partisan and *permanent tariff commission* whose duty it will be to intelligently assist Congress to make such changes in our tariff and reciprocity laws, from time to time, as may be found necessary.

J. R. BACK, *Chairman.*

The Committee on Meetings and Receptions announce the dates of smoke talks for the winter as Thursday, Dec. 18; Friday, Jan. 16; Friday, Feb. 20; Friday, March 20. The subjects to be taken up will be announced from time to time.

The concert of the Glee Club at Tuckerman Hall Tuesday, Dec. 2, it is expected, will be one of unusual interest. It is quite fitting that the Board of Trade should patronize the new building.

President W. H. Blodget was elected delegate to the State Board of Trade for a term of three years and vice-president. Ex-President R. B. Fowler was elected for two years to fill out the unexpired term of Justin A. Ware.

The Committee on Mercantile Affairs, assisted by the Committee on Transportation, have arranged for a "Merchants' Week" to be held the week beginning Dec. 1. Special inducements will be offered to all out-of-town patrons during this week, including a return fare, free to all purchasers of one dollar or

more of merchandise at the store of any Worcester merchant handling the special return fare tickets to be issued by the Board of Trade. Half of this expense, including the printing of tickets, will be borne by the trolley lines.

Plans are already made whereby this "Merchants' Week" will be most liberally advertised, and it is thought that its success is assured.

Respectfully yours,
IRVING SWAN BROWN,
Chairman of Mercantile Affairs Committee.

It is desired and expected that the merchants will all co-operate in this matter and derive benefit therefrom. Some merchants have seemed to feel that the Board of Trade was designed more for the benefit of the manufacturers, and many of the prominent merchants have withheld their support from the organization. This feeling is fast disappearing, and we expect there will be in the future a larger number of merchants included in the membership.

In the Industrial Notes in this issue will be found a description of a new machine which is made in this city.

All manufacturers are invited to contribute to these columns under this head of Industrial Notes. If any manufacturer of Worcester is perfecting any new device, he is invited to send in his illustrations and description not later than the 15th of the month preceding the date of issue.

This new departure can be made of value not only to the magazine, but to the manufacturer, and thereby be a benefit to Worcester, which is the aim of the publication.

The recent smoke-talk on malaria excited so much interest that the same will doubtless be printed in the next MAGAZINE. Attention to the perils of infection, by whatever means conveyed, is not confined to Worcester, but everywhere peop'e are more and more alive to propositions which promise a degree of freedom from such menaces to health.

It is expected that the following smoke-talks will be equally suggestive and profitable. They have been from the outset a source of mental quickening which must bear fruit in the future. In the routine of mechanical and mercantile life, our citizens have sometimes overlooked the advances in science.

WORCESTER CITY HALL, FROM THE EAST.

The Worcester Magazine

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TERMS: $1.00 a year; single copies, 10 cents. For sale by newsdealers. Edited by Alfred S. Roe. Published Monthly by the Board of Trade of Worcester, Mass. Committee on Publication, Rufus B. Fowler, G. Stanley Hall, Irving E. Comins, Milton P. Higgins, George W. Mackintire. Address all communications to 11 Foster street, Worcester, Board of Trade Rooms. Entered at the Post Office, Worcester, Mass., as second-class matter, May 10, 1901.

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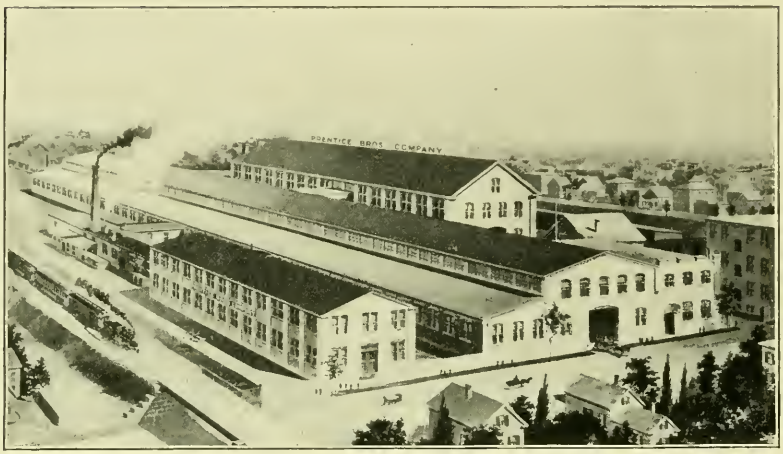

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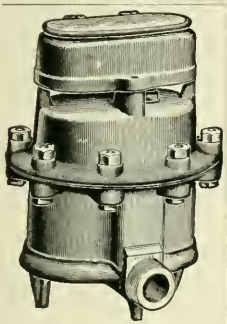

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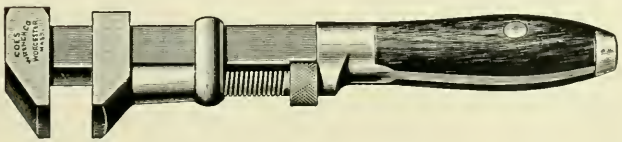

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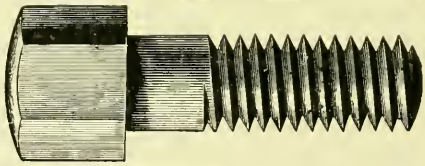

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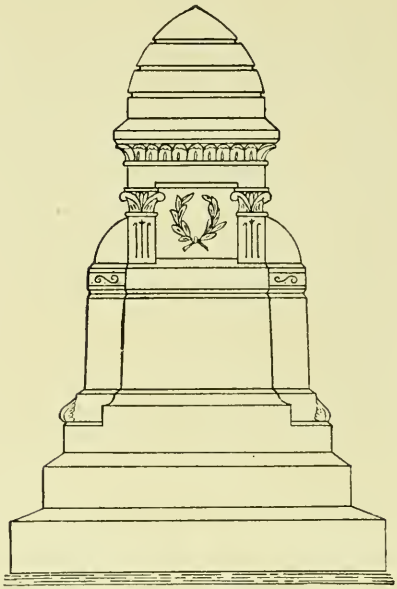

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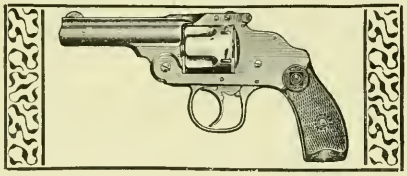

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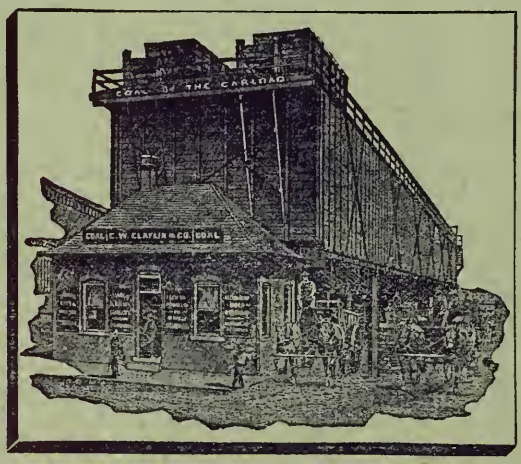

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TERMS: $1.00 a year; single copies, 10 cents. For sale by newsdealers. Edited by Alfred S. Roe. Published Monthly by the Board of Trade of Worcester, Mass. Committee on Publication, Rufus B. Fowler, G. Stanley Hall, Irving E. Comins, Milton P. Higgins, George W. Mackintire. Address all communications to 11 Foster street, Worcester, Board of Trade Rooms. Entered at the Post Office, Worcester, Mass., as second-class matter, May 10, 1901.

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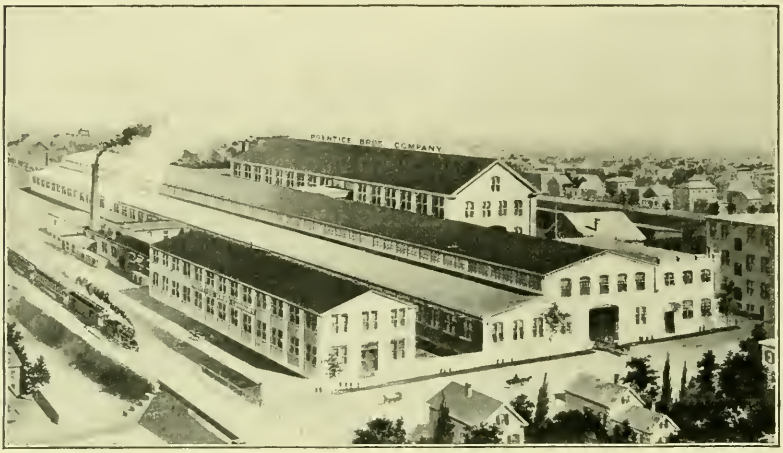

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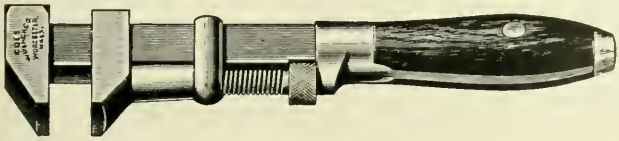

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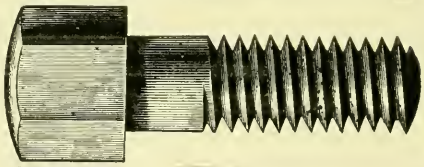

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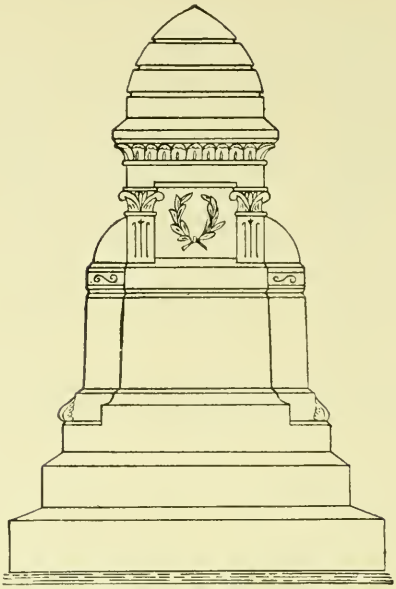

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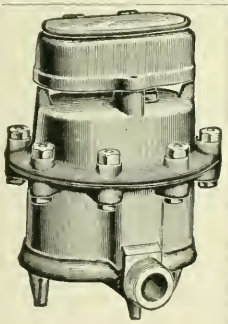

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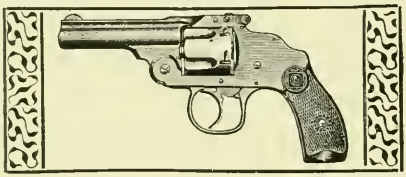

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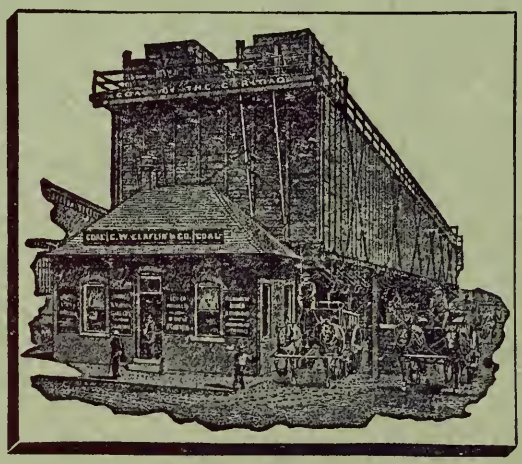

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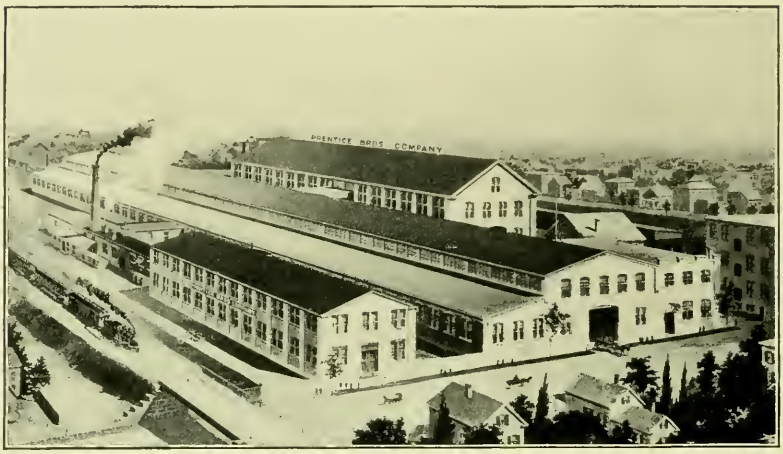

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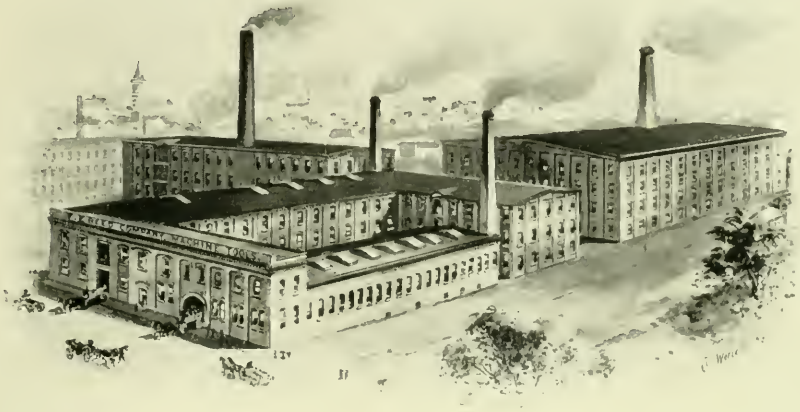

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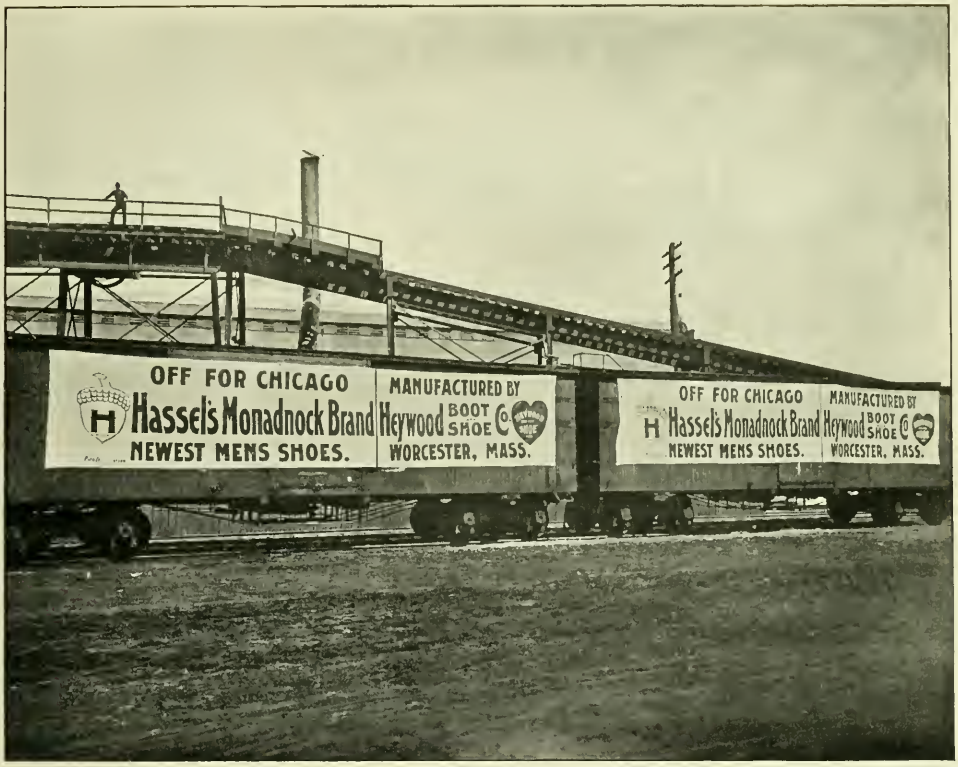

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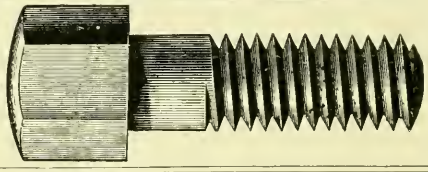

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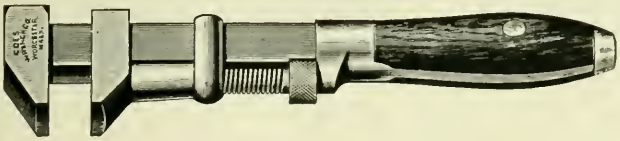

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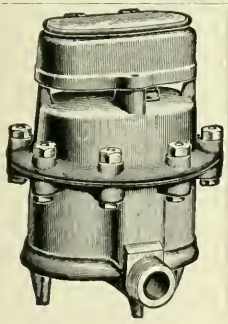

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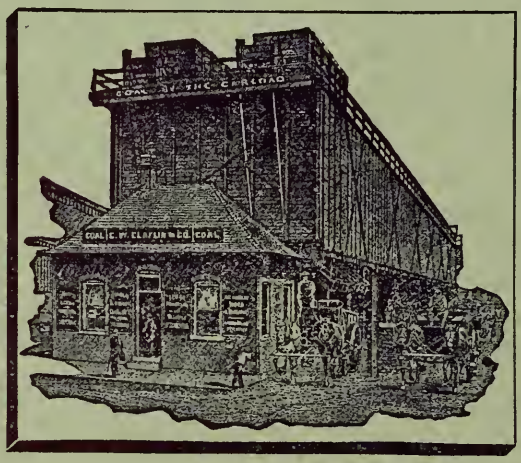

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TERMS: $1.00 a year; single copies, 10 cents. For sale by newsdealers. Edited by Alfred S. Roe. Published Monthly by the Board of Trade of Worcester, Mass. Committee on Publication, Rufus B. Fowler, G. Stanley Hall, Irving E. Comins, Milton P. Higgins, George W. Mackintire. Address all communications to 11 Foster street, Worcester, Board of Trade Rooms. Entered at the Post Office, Worcester, Mass., as second-class matter, May 10, 1901.

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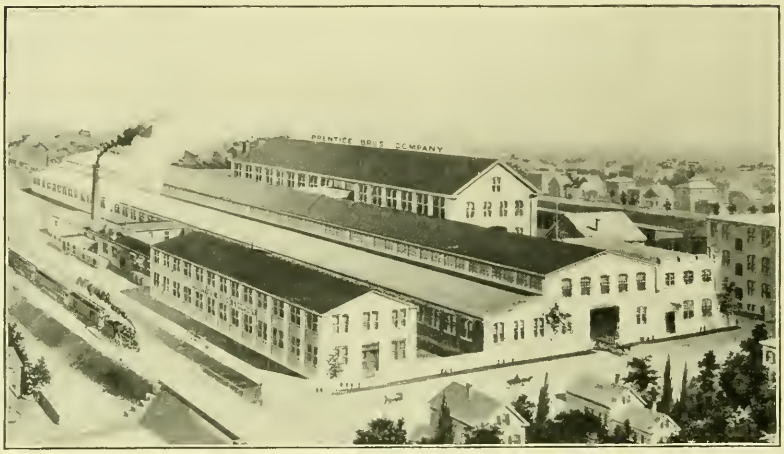

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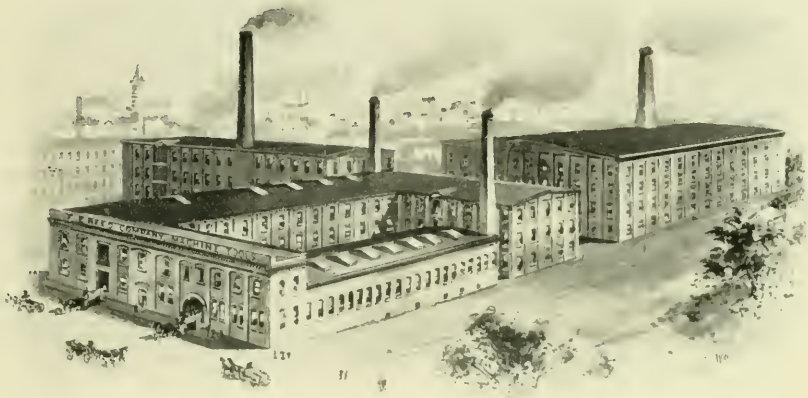

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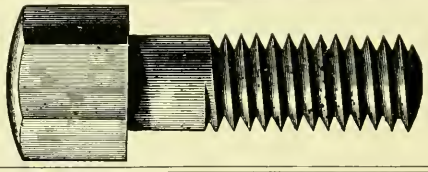

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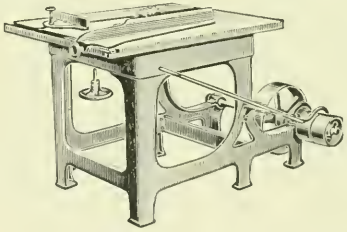

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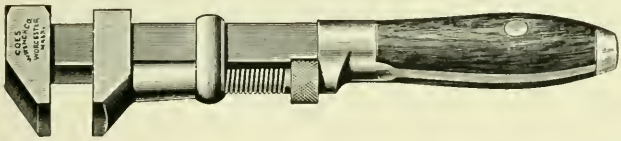

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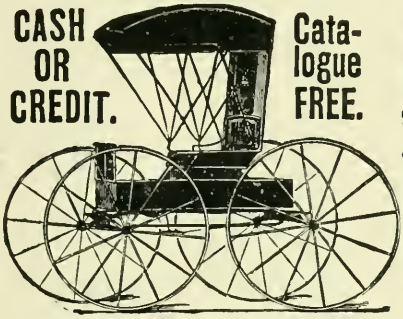

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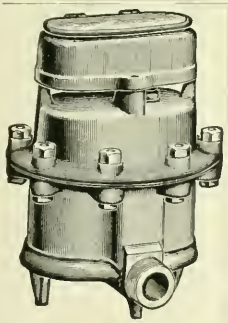

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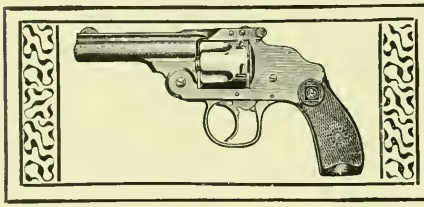

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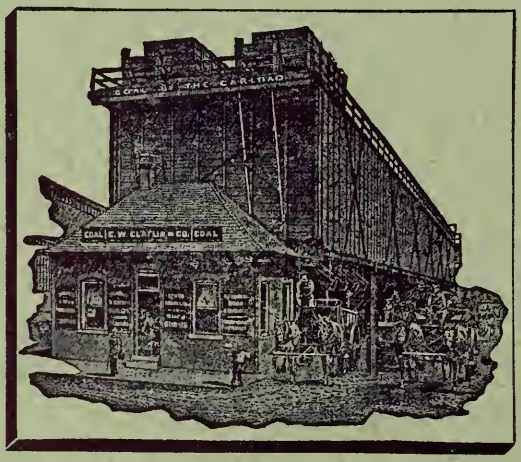

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TERMS: $1.00 a year; single copies, 10 cents. For sale by newsdealers. Edited by Alfred S. Roe. Published Monthly by the Board of Trade of Worcester, Mass. Committee on Publication, Rufus B. Fowler, G. Stanley Hall, Irving E. Comins, Milton P. Higgins, George W. Mackintire. Address all communications to 11 Foster street, Worcester, Board of Trade Rooms. Entered at the Post Office, Worcester, Mass., as second-class matter, May 10, 1901.

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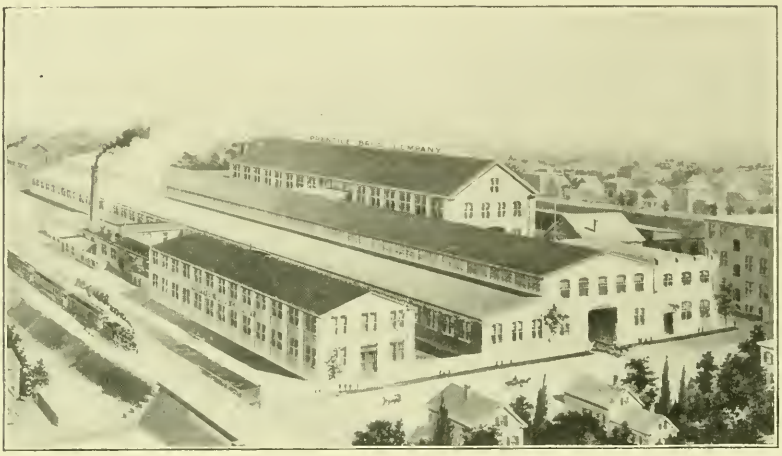

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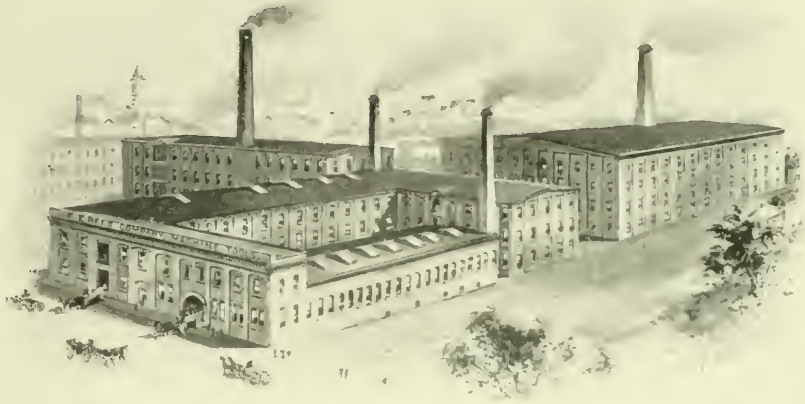

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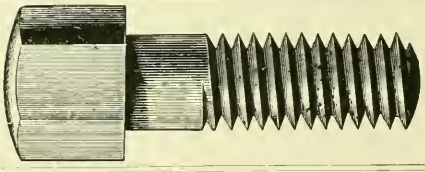

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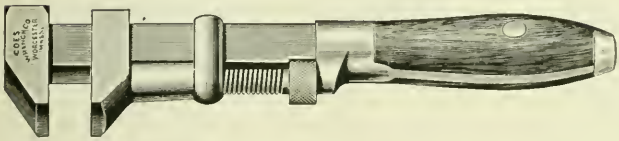

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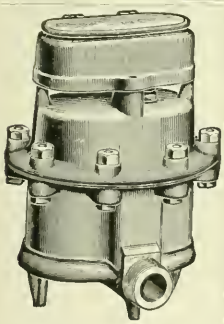

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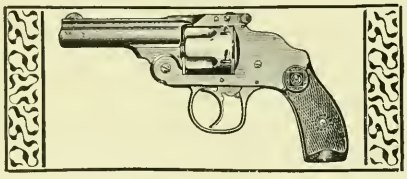

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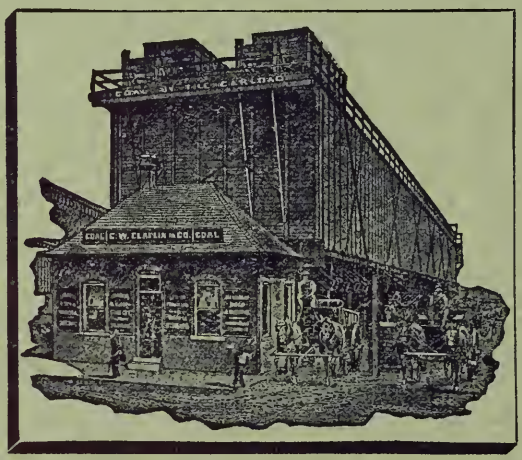

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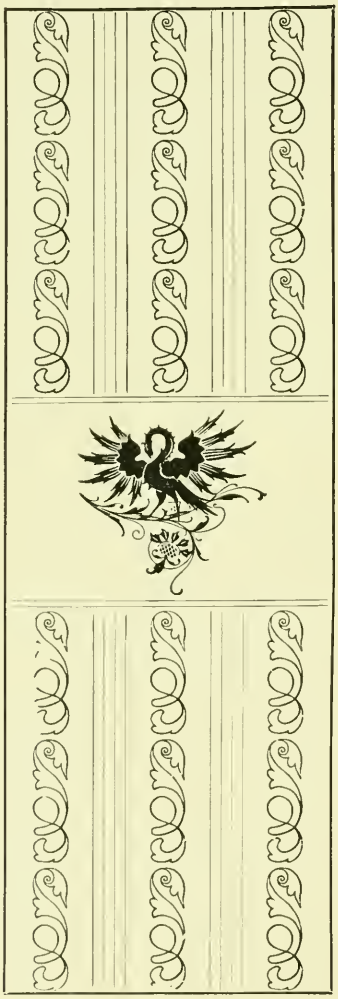

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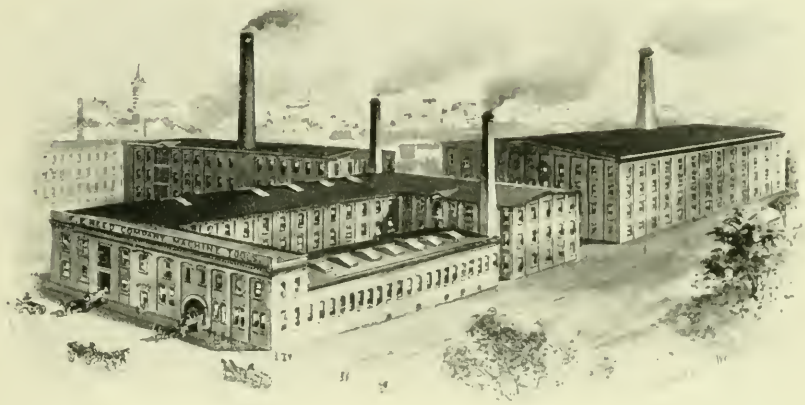

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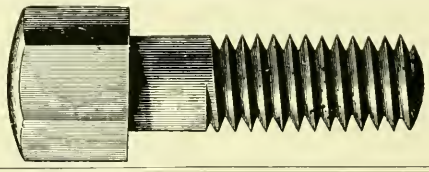

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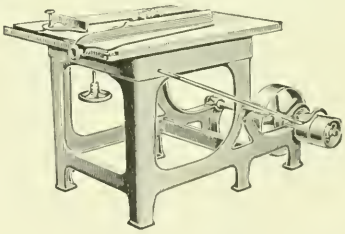

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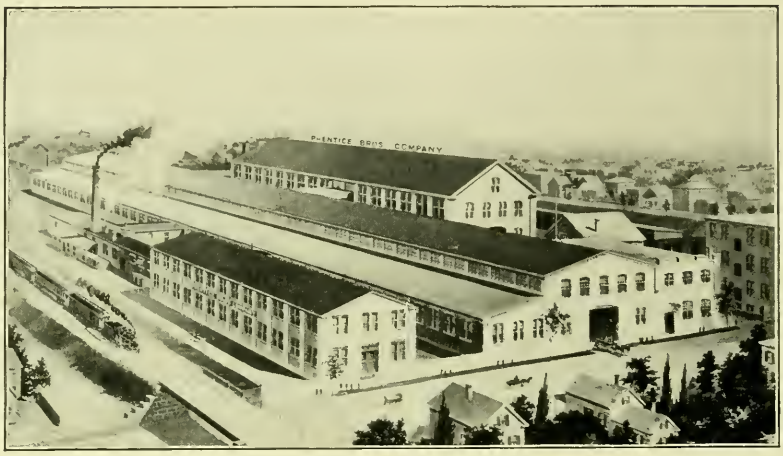

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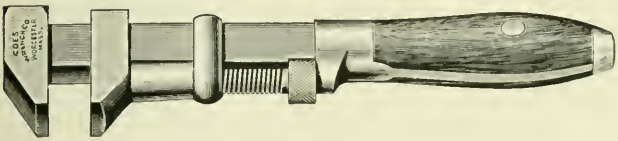

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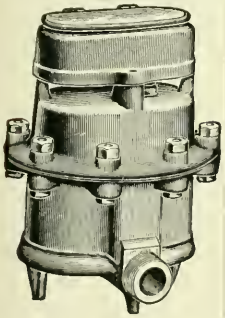

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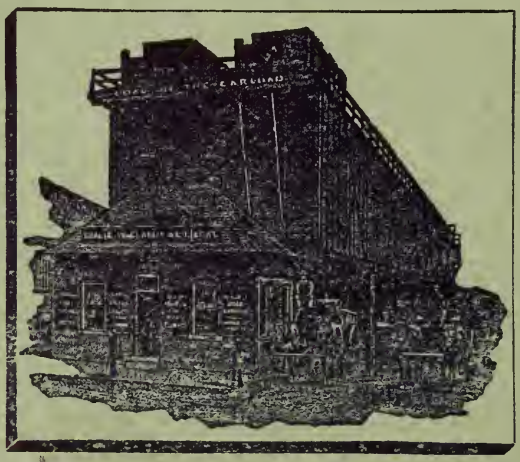

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